retro GAMER Collection

Volume 6



AMSTRAD | COMMODORE | SEGA | NINTENDO | ATARI | SINCLAIR | NEO-GEO | SONY | COIN-OP | MOBILE

Welcome to

retro GAMER Collection

Hello, and welcome back to another huge slice of retro gaming goodness. The following pages have been personally hand-picked by **Retro Gamer**'s editor to ensure that you hold some of the finest content to have appeared in the award-winning magazine. **Retro Gamer** continues to reveal fascinating facts about our beloved hobby, and this latest book features many of those exclusives, including the stories behind Missile Command and Ms Pac-Man, as well as a rare interview with the reclusive Julian Gollop. It's an essential guide for anyone who loves classic gaming and proves that our beloved hobby is going from strength to strength.

Enjoy the book.



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Website: www.imagine-publishing.co.uk
Twitter: @Books_Imagine
Facebook: www.facebook.com/ImagineBookazines

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Printed by
William Gibbons, 26 Planetary Road, Willenhall, West Midlands, WV13 3XT

Distributed in the UK & Eire by
Imagine Publishing Ltd, www.imagineshop.co.uk. Tel 01202 586200

Distributed in Australia by
Gordon & Gotch, Equinox Centre, 18 Rodborough Road, Frenchs Forest, NSW 2086. Tel + 61 2 9972 8800

Distributed in the Rest of the World by
Marketforce, Blue Fin Building, 110 Southwark Street, London, SE1 0SU.

ISBN 978-1908222978

Part of the retro GAMER bookazine series

IMAGINEER OF THE YEAR DANIELLE DIXON
IMAGINE PUBLISHING
TEAM OF THE YEAR BOOKAZINES

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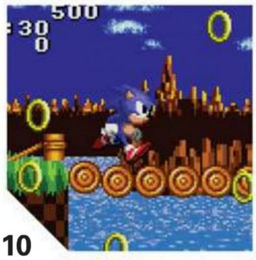








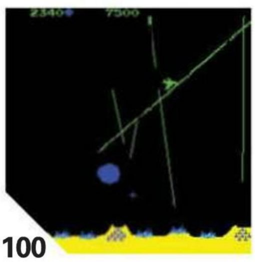






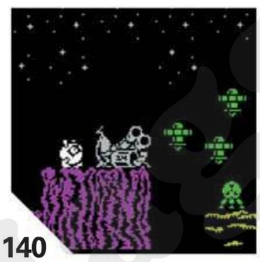










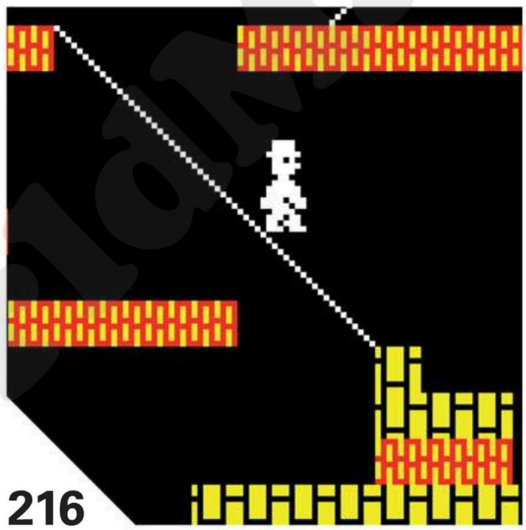


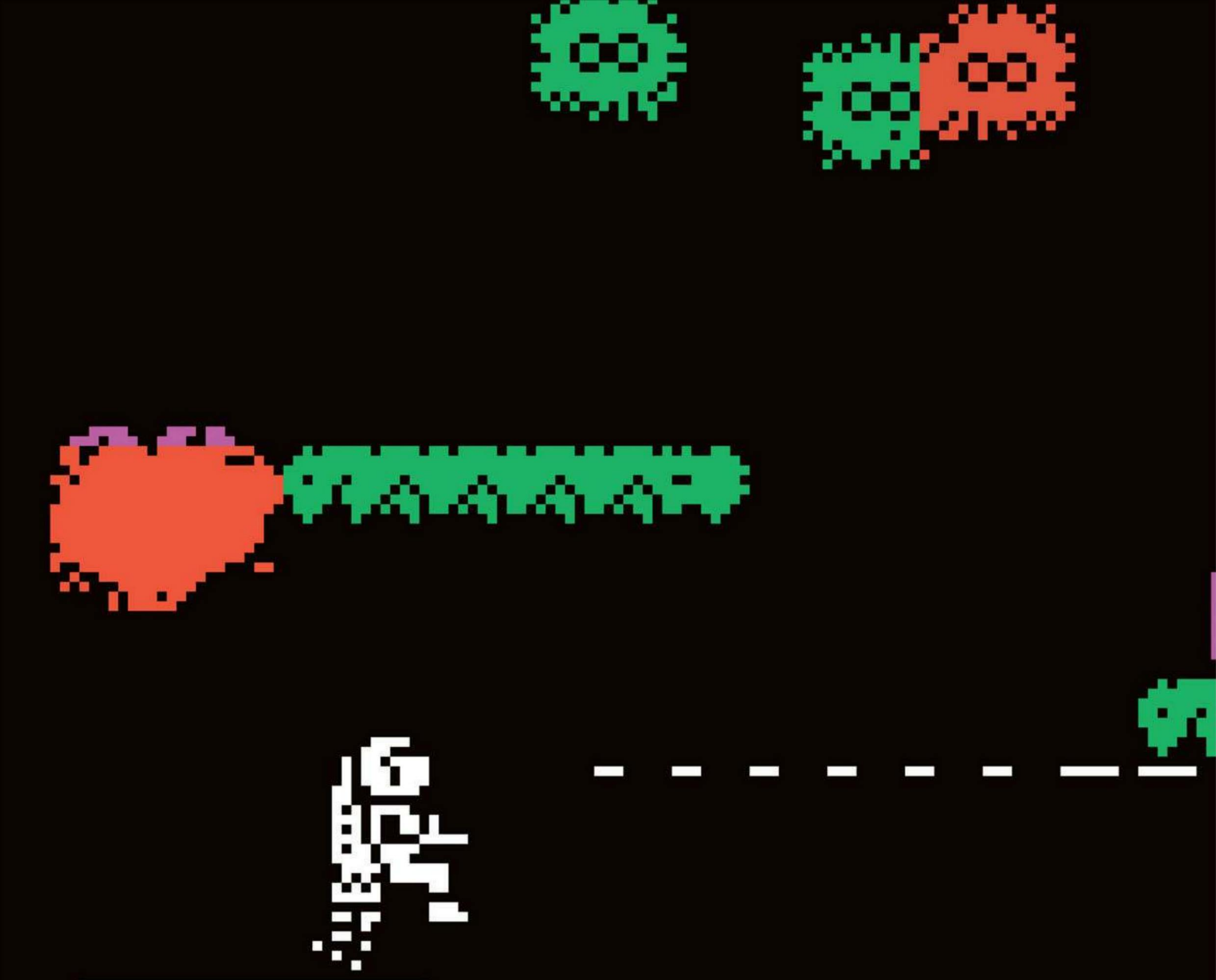












Jetpac

YOU NEVER FORGET YOUR FIRST TIME

RETROREVIVAL



» ZX SPECTRUM
» ULTIMATE PLAY THE GAME
» 1983

Our Rare article from a couple of months ago upset a few readers because it had no references to Ultimate Play The Game. The truth of the matter is that Ultimate and Rare are two separate companies, despite the fact that one obviously wouldn't have existed without the other. Still, we appreciate that, for some, Rare and Ultimate will be forever linked with each other, so here's a look at the game that started the ball rolling and turned a two-brother team into one of gaming's most well-known developers.

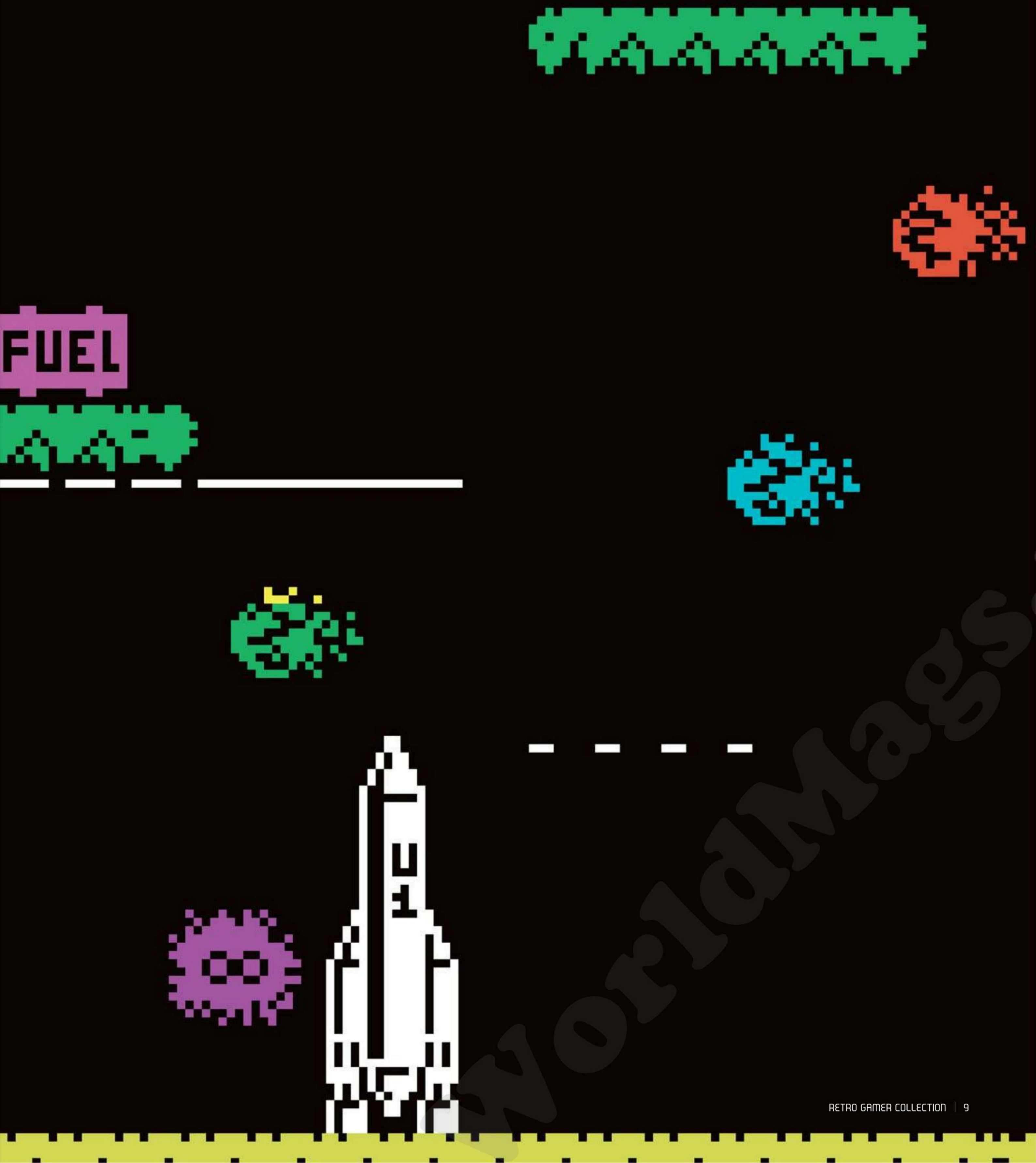
It's fair to say that for this particular ten-year-old, *Jetpac* was a revelation. I'd often pop round my friend's house and watch, bored, as he tapped out type-in programs on his ZX81; all this changed, however, when he upgraded to his Spectrum. It was like the creation of the universe.

All of a sudden, home gaming not only made sense, but could be just as good as the games I used to enjoy playing in the arcades when I was occasionally allowed to go to them – don't forget, I was still only ten.

Ultimate's *Jetpac* changed all that, as it was perfect proof that fast-paced arcade-style games were possible on seemingly crusty computers. I was hooked on the adventures of Jetman, and it would be the first game, along with the excellent *3D Deathchase*, which you'll find given its dues on page 90, that we'd load up whenever I visited Paul's house.

Even today, *Jetpac* is a wonderfully slick piece of coding. Granted, the gameplay is simple – assemble a space ship, fill it with fuel, then repeat ad nauseam – but it's so beautifully crafted and so tight that a five-minute play soon turns into an hour-long marathon. Little wonder, then, that it was the first and only game in the Ultimate back catalogue that Rare ever remade, in the form of Xbox Live Arcade's excellent *Jetpac Refuelled*.

While Jetman went on to star in several more adventures from Ultimate and Rare, nothing ever came close to his original outing for me, and it's a game that I return to again and again and again.


FUEL



SONIC BOOM:

The Success Story Of Sonic The Hedgehog

Sonic the Hedgehog is one of gaming's biggest success stories, but he has also had a long life of ups and downs. Here we chart the Blue Blur's story so far and talk to many of the designers charged with keeping the hedgehog spinning and those that just love Sega's iconic mascot



Is it possible to write a history of Sonic without mentioning Mario? In theory, but you'd be foolish to try. Though created a decade later, Sonic's existence hinges on that of Mario, and the two have been rivals ever since. Sonic's history is therefore also Mario's, and even platform games as a whole.

The sheer brilliance of *Super Mario Bros* put a Nintendo Entertainment System into more than 60 million homes worldwide, while Sega's 8-bit equivalent, the Master System, had to make do with just 13 million. There are several reasons for this disparity, of course, but Mario was one of the biggest reasons and Sega knew it. Launching its 16-bit system, the Mega Drive, in 1988, Sega had a two-year head start on the Super Famicom/SNES, but even with such an advantage it struggled to keep up with the ageing NES.

Sega's expertise, right through the Eighties and beyond, focused on its coin-op games. This was where Sega ruled videogames, its comfort zone, and the company certainly managed to attract a sizeable fan base just by being able to convert its greatest hits to the home. But the tastes of console gamers gradually shifted throughout the mid to late Eighties. NES games like *Super Mario Bros*, *The Legend Of Zelda*, *Mega Man*, *Castlevania* and *Final Fantasy* represented a shift away from the instant gratification of the arcades and towards a more protracted experience that gamers could spend hours, days and weeks absorbed in.

Sega remained extremely successful in the arcades, of course, so its home conversions also remained a core part of its business, especially since they were relatively cheap to produce and sold in large enough numbers. But the Master System and Mega Drive needed original games, unconnected to the coin-ops. These came slowly but surely. Games like *Phantasy Star* and *Streets Of Rage* were great console exclusives that represented a step in the right direction, and Sega even published some wonderful platform games in the shape of *Psycho Fox* and *Alex Kidd*, but these did little to slow *Mario*'s astronomical rise in popularity. By 1990 there had been four incredible *Mario* platform games, each one somehow more ingenious than the last, to the point where for many people Mario and videogames were one and the same thing. Sega still needed its Mario.

Perhaps it's a sign of how things had changed by the Nineties, or maybe it shows just how different Sega and Nintendo really were, but Sonic's origins were actually very different to those of Mario. The latter was famously created out of necessity. The limitations of 1981's visual technology meant that it was difficult to even create a character that could be recognised as a person, so Mario became a short, fat plumber with a moustache not because Shigeru Miyamoto had any urge to tell a story about a man in dungarees but because that was all the technology would allow. By 1991, however, technology had progressed to the point where just about any character could be represented on screen, so instead of creating a character out of blocks on graph paper with a particular type of game in mind, Sega simply started with paper and the desire to make a character of any kind.

"Everything about Sonic The Hedgehog was designed to make the game play quickly, keep momentum up, keep moving at top speed"

Developer Quotes

"I have great memories of *Sonic*. In fact, it provided a ton of inspiration for a game Team17 developed in the early Nineties (*Superfrog*) and I guess a host of others too. The speed of the game, along with great vibrant art was a real head-turner at the time. It's a powerful series that's had a rollercoaster ride the last few years but I would like to hope it's getting back to where it was. I much prefer the 2D playfields."

Martyn Brown, co-founder of Team 17

In what is now a part of the company's legend, Sega set several of its best designers to work, challenging them to create a new character that could become a new type of hero for Sega and a true rival to Mario. Several characters were created as a result of this exercise, many of which were used in later games, but the winner was a little blue hedgehog, drawn by Naoto Oshima, one of the designers on the first two *Phantasy Star* games.

Originally named Mr Needlemouse, Oshima's hedgehog was coloured the same blue as the Sega logo, which only seemed appropriate since the character was designed to be the company's new mascot.

Designed primarily to appeal to an American audience, he also featured the colours white and red, though Oshima puts this down to coincidence, citing Santa Claus's colour scheme and the belt across Michael Jackson's jacket on the cover to *Bad* as the inspiration for Sonic's shoes. Finally, Oshima wanted to imbue his character with a 'can do' attitude, inspired by television footage of the then Arkansas governor Bill Clinton. In the original design, Sonic also had fangs and played in a rock band, but these elements were removed under the advice of Sega America's Madeline Schroeder.

Sonic's friendly but cool character design was certainly effective, but nobody ever played *Super Mario Bros* because they liked the character. At least we hope they didn't. Sonic needed the best kind of platform game, and he got one from Yuji



Developer Quotes

"I remember seeing *Sonic* at an early trade show in the US. It was January 1991 at CES Las Vegas. It was a single level and fairly low profile on Sega's booth – just one or two discreet screens. The Genesis had been launched in the US six months before.

"Six months later at the summer CES in Chicago, Sega went into overdrive promoting *Sonic*. It stole the show. Back then all videogames were slow, so this was revolutionary and eye-catching! Sega set out to use *Sonic* to demonstrate the speed of their new console, and they pulled it off fantastically!"

Philip Oliver, CEO & co-founder of Blitz Games Studios

Must-Have Merchandise

There's been an unquantifiable amount of Sonic merchandise produced in the past 21 years. Here's our pick of some of the most interesting examples

1. BOARD GAME
MB Games licensed tons of videogame properties for its board game business in the Eighties and Nineties. The *Sonic* one is typical of the line, vaguely translating the videogame experience into a fun but uncomplicated board game.



2. STYLUS
Released as a pre-order incentive for DS RPG *Sonic Chronicles: The Dark Brotherhood*, this collection of three styluses allows you to decorate your DS with Sonic, Knuckles and… uh… someone we don't recognise.



3. SONIC RACING SYSTEM
Being focused on speed, Sonic has appeared in a bunch of racing games, both video and physical. This one is a lot like Scalextric, only with a hedgehog and a fox instead of cars.



4. PAPERCRAFT
Created by Sega to celebrate Sonic's 15th anniversary in 2006, this model re-creates Green Hill Zone in colourful, papery style. Get it from: **sonic.sega.jp/SonicChannel/enjoy/papercraft/index.html**



5. CONFUSING BACKPACK
You might have a hard time finding this bootleg backpack out in the wild but it's sure worth the effort. Just look at how many confusing, incongruous elements it packs into a single item.





Naka and Hirokazu Yasuhara, Sega programmer and game designer respectively, who joined with Oshima to form Sonic Team and develop *Sonic The Hedgehog*.

Yuji Naka was practically legendary at Sega for his incredible programming ability, and his influence over *Sonic The Hedgehog* cannot be overstated. Naka was a great fan of *Super Mario Bros* but wanted to play something much faster, so that was the direction that the project went



in. Everything about it was designed to make the game play quickly – quite ironic given the slow speed of hedgehogs. There are the loop-the-loops and the springs, all good for keeping momentum up, and the gameplay flowing from left to right, while Sonic's ability to curl into a spiky ball mid-jump allowed him to hit an enemy, eliminate it, and then keep moving at top speed.

The resulting game was pure Sega. Almost blinding in its use of colour, thrilling to play and totally unwilling to take itself too seriously, it was a true pleasure that effortlessly appealed to anyone who tried it and had a very likeable character as its star. Tyler Sigman, lead designer on 2006's *Sonic Rivals*, recalls: "I played the original *Sonic* on Genesis when I was a teenager, and like most people, I loved it! The speed, graphics and character were great. Like *Mario* and *Mega Man*, *Sonic* was really memorable platforming. It seems such a small thing now, but Sonic's attitude really did stand out from a lot of other characters at the time," he says, citing the way Sonic would impatiently tap his feet when left alone as an example of the hedgehog's cool factor.

Christian Senn, director of the cancelled *Sonic X-Treme*, is also a fan of Sonic's famous attitude but takes the time to praise the exciting, kinetic gameplay of the original game. "I liked Sonic's look, his attitude, and the way it felt to zoom around the playfields," he says. "I liked the look and functionality of the enemies, the fact

Sonic Timeline

A quick guide to Sonic's most memorable games… and a few others



Sonic The Hedgehog
Multi | 1991
One year after the competition to find a Sega figurehead, Sonic's first outing was unveiled. Created by Yuji Naka, *Sonic The Hedgehog*'s mixture of speed and graphical finesse helped to establish the Mega Drive as a serious contender in the hearts of gamers the world over.

Sonic The Hedgehog 2
Multi | 1992
This time, players found themselves immersed in a game that had been improved in every conceivable way. It was also the first console game to have a worldwide launch when Tuesday 24 November 1992 became known as '*Sonic 2*'s Day'. Geddit?





SEGASonic The Hedgehog
Arcade | 1993
With the home market stitched up, Sega decided to try its hand in the arcades. Trackballs at the ready and two new characters to play with failed to inspire much interest. Poor distribution and the fact that the game deviated from the normal gameplay didn't help either.

Sonic CD
Mega-CD | 1993
New hardware meant that there really was only one character to sell it to the masses. Basically, this was *Sonic The Hedgehog 2* with a time travel element. For what it's worth, the game did try to make use of the CD-ROM, with much-improved animation and sound.





Sonic Chaos
Game Gear | 1993
Handheld gamers rejoiced at the knowledge that Sonic was back on the Game Gear. This time you could play through the game as Tails, who had been absent from previous Game Gear outings, as the game revealed more fully what the handheld was capable of.

"Following directly behind Sonic at all times, Tails' ginger blur added a nice visual flourish to the game's colourful rollercoaster ride"

that they provided some challenge and offered a break from the rush of speed. I think what I enjoyed most of all about the game was the balance between puzzles, speed, combat and collection. The physics and feeling of interaction really felt great."

The game and its star became synonymous with Sega and helped propel the Mega Drive to sales of around 40 million, only 9 million short of the SNES – a minuscule gap compared to the 47 million that separated the Master System and NES. *Sonic The Hedgehog* was so popular that it inevitably became a huge brand for Sega, starting, of course, with sequels. Four such sequels followed on the Mega Drive and Mega-CD alone, not to mention all the spin-off games and Master System and Game Gear exclusives that also appeared in the same period. Aside from some tiny proportional changes, Sonic's appearance remained the same in the sequels. And why wouldn't it? Sega pretty much got the design spot-on from the beginning. Plus, the company's artists probably had their hands busy designing the multitude of new characters that the publisher somehow seemed to think were so necessary.

Tails wasn't so bad, admittedly. In fact, his inclusion in *Sonic The Hedgehog 2* is one of the single most underrated features of the series. Following directly behind Sonic at all times, his ginger blur added a nice visual flourish to the game's colourful rollercoaster ride. And then there's the fact that a second player could plug in their own pad and take control of Tails, happily jumping around behind Sonic and helping out with enemies, but without the risk of failure. It's the sort of feature that games all too rarely employ, allowing a younger or less skilled player to join in and have fun without any frustration, and it's something that the *Mario* series has only recently begun to experiment with in *Super Mario Galaxy*'s co-star mode.

Sadly the same can't be said for the other characters introduced through *Sonic*'s early years. The likes of Knuckles and Amy Rose signified the start of a worrying trend toward unnecessary, annoying new characters that would only get worse as the years went by. Though the early to mid Nineties certainly has its fair share of terrible sidekicks. Anyone remember Mighty the Armadillo, Espio the Chameleon or – ahem – Nack the Weasel? No, thought not.

Despite the invasion of the world's most annoying characters, *Sonic 2* and *3, Sonic & Knuckles* and *Sonic CD* all proved to be brilliant platform games and all played their part in catapulting Sega's little blue hedgehog into popular culture as a whole. Countless merchandise tie-ins



» [Mega Drive] *Sonic The Hedgehog 2* introduced Tails, who was fine on his own but started a worrying trend.

Developer Quotes

"Like a *Super Mario* game on steroids, *Sonic* was a wonderwall of hyperkinetic play for the ADHD generation. The feeling was supersonic… sans gin and tonic!"

Eugene Jarvis, creator of Robotron: 2084 and Defender

Sonic Spinball
Multi | 1993

As popular as Sonic was, *Sonic Spinball* was an attempt to cash in yet further on the blue speedy one. Once again, deviating from what gamers expected proved its undoing, and the fact that this was a deeply average game didn't help matters.





Sonic Drift
Game Gear | 1994

What Game Gear fans needed was a *Mario Kart* game, or so Sega decided. A *Mario Kart*-style racer would have been ideal. However, what Japanese gamers got was a slow, dull and uninspired racing game that was never released outside Japan, thankfully.

Sonic The Hedgehog 3
Mega Drive | 1994

A return to form for Sonic with this very impressive outing that not only looked beautiful but also added a greater depth of gameplay than had been seen previously. Of special note is that this is the first *Sonic* game to feature a save feature, thanks to the built-in battery.





Sonic & Knuckles
Mega Drive | 1994

Picking up where *Sonic 3* left off, this is more of the same great gameplay lifted from its predecessor. However, thanks to the use of Sega's lock-on technology, further gaming bonuses could be attained by simply connecting the cart to other *Sonic* games. Genius.

Sonic Triple Trouble
Game Gear | 1994

After a glut of ill-conceived Game Gear outings, the ickle Sonic was back on form and back to doing what he and Tails did best – collecting rings, emeralds and racing through bonus stages. As Game Gear *Sonic* games go, this was mightily impressive.



followed, including a total of four different animated TV series, a movie and enough comic books to destroy an entire rainforest. And there were more games too, Sonic proving so popular that Sega felt it could drop him into any old game to boost sales. Which, to be honest, it was right about. Throughout the early Nineties, *Sonic* characters starred in a *Puyo Puyo* clone, a pinball game, two kart racers and a couple of isometric platformers too, all of them very successful. Sega had clearly got the Mario equivalent it was looking for.

As Sega transitioned from the Mega Drive to the Saturn, it only seemed inevitable that Sonic would make the leap too, but, for a multitude of reasons, it never really happened. He certainly put in his fair share of appearances, though. There was the not really 3D at all *Sonic 3D*, the actually quite brilliant retro compilation *Sonic Jam*, and the technically impressive racing game *Sonic R*. But no proper platform game. Sonic Team chose to spend the Saturn era developing original ideas like *NiGHTS Into Dreams* and *Burning Rangers* instead – for which we're very thankful, of course – while the US-based Sega Technical Institute was charged with developing a full 3D update of the series in the form of *Sonic X-Treme*, which sadly failed to reach completion.

Developer Quotes

"Sega knew they needed a character of their own that could match up with Mario, but that is easier said than done. They set an ambitious goal and managed to pull it off in a compelling and unique way."

Trip Hawkins, founder of Electronic Arts and 3DO

Christian Senn recalls the process of trying to rework the character of Sonic into three dimensions. "I wanted to maintain the look and feel of the 2D Sonic from *Sonic 3* for *Sonic X-Treme*," he says. "In addition to the game graphics, the original sketches of Sonic by Naoto Oshima were wonderful and I was drawn to them as inspiration for *X-Treme*. I discussed a desire to maintain the integrity of the original 2D art style with lead artist Ross Harris, who subsequently did a brilliant job of bringing Sonic to life in 3D. We had not yet seen any representations of Sonic in 3D, so it was very exciting to pave new ground. We wanted to continue the quality and polish that our predecessors had achieved, so attention to the big picture and the details was essential."

Translating the gameplay into 3D was less easy, however, and may be the key to the reason why the troubled *Sonic X-Treme* was never completed. "I desired to take the aforementioned balance of *Sonic The Hedgehog* and translate it into 3D," says Senn. "Not having any idea of how large a bite we were trying to chew, the intention was to combine speed, puzzle-solving, ring-collection, bonus rounds, special rounds, enemies, bosses and some new gameplay elements nobody had every seen before. One of the hallmarks of the successive 2D *Sonic* titles was to introduce something new every game. We were trying to create all of the original elements for the first time in a whole new dimension, and even add more. In hindsight, it might have been wise to attempt to re-create the basic elements of the 2D games in 3D, which might have allowed us time to polish the game before finishing and releasing it."

"The key thing I remember Sega always pushing for was to 'make Sonic move faster'. Getting the feeling of speed was a real challenge"



» [Mega Drive] *Sonic 3* was so big and ambitious that it was split in half, with the rest of it going into *Sonic & Knuckles*.



Jon Burton, founder and director of Traveller's Tales, had more success than Senn, creating and finishing two *Sonic* games, *Sonic 3D* and *Sonic R*, for the Saturn, though neither of them could really be classed as proper *Sonic* platform games. "The key thing I remember Sega always pushing for was to 'make Sonic move faster'," says Burton. "In *Sonic 3D*, getting the feeling of speed was a

Sonic Timeline

A quick guide to Sonic's most memorable games... and a few others



Sonic Drift 2
Game Gear | 1995

Compared to the original, *Sonic Drift 2* was a much more considered sequel. This time the game delivered a better Grand Prix mode, banked curves, hills and the all-important link-up mode. Not the class act that *Mario Kart* proved to be, but a worthy attempt nonetheless.

Sonic Labyrinth
Game Gear | 1995

Sega continued to treat Game Gear owners to more variants. This time it decided that a puzzle game in the style of *Marble Madness* was the order of the day. However, the time limits and puzzle elements brought down what may have been a half-decent game.





Sonic The Fighters
Arcade | 1996

It had been three years since the last *Sonic* outing at the arcades, so it must have seemed prudent to have another stab at the coin-op fans. Unfortunately, because it was aimed at kids, it lacked depth and ultimately proved to be an unrewarding experience.

Sonic 3D
Multi | 1996

New console, new *Sonic* game. Well, kind of… This was pretty much the same game that would appear on the Mega Drive but with added 3D tunnels. However, at the time it impressed gamers and gave them an indication of what the Saturn was capable of.





Sonic Jam
Saturn | 1997

This had nothing to do with fruit, but from Sega's point of view it wasn't a bad ploy to get some money from Saturn owners who missed out on the Mega Drive games. Aside from the omission of *Sonic CD*, this was the perfect way to enjoy classic *Sonic* action.

Toon Struck

Robby London was head of creative affairs at DIC, the animation studio behind scores of popular children's cartoons between 1980 and 2008, including three different Sonic The Hedgehog series. Here he tells us what it was like to work with Sega's most famous face

Retro Gamer: What was your first experience of *Sonic The Hedgehog* and what did you think?
Robby London: We knew just from its trending popularity at the time that we wanted to pitch Sega of America on the idea of developing *Sonic* into an animated series for television, and so we needed to bone up on the property. Since I am not a gamer, we got one of the DIC artists who was a *Sonic* aficionado to play it for a video capture. So I was introduced to it by watching a video of the game being played. I recall thinking it had a very charismatic lead character and an interesting look. Of course, I couldn't make too much sense of the story elements, but then in those days it was quite typical for the lore behind most games to be elusive and impenetrable.

RG: What instructions did Sega give you in terms of what you could or couldn't do with the character?
RL: I don't remember any specific upfront instructions per se, other than emphasising to us how crucially important and valuable Sonic was to them. Which, of course, we knew! Sega did retain a contractual approval right for everything we did. So when we'd submit something like a character design, they would often have comments or requests for revisions, mostly on specific details of the designs, and mostly to ensure there was conformity across all the *Sonic* products they were licensing. They also had approval rights on all the voices, music, individual scripts for the episodes and various other creative elements. While they gave notes and requested revisions from time to time, I can't remember any specific theme to their comments nor any generic instructions. They had a representative named Jane Thompson who spent a lot of time with us in LA. Because she was professional and knowledgeable about production, that turned out to be exceedingly helpful.

RG: What do you think are the important characteristics of Sonic and how are these captured in a cartoon rather than a game?
RL: Mostly, I think it's attitude. Even Sega's original design of the character conveyed a lot of 'tude; cockiness, perseverance and a sort of a devil-be-damned outlook. Traits such as these lend themselves really well to an animated character for a television cartoon and can be significantly enhanced in that medium. Those of us who were writers created a lore and a context and situations for Sonic to demonstrate this persona with a richness that was not possible in the game. We came up with the phrase 'fastest thing alive', the signature arms-crossed, impatient foot-tapping pose, along with the catchphrase: 'I'm waiiiiting.' We also gave the character an actual voice, in this case Jaleel White, a huge TV star in America at the time for his role as Steve Urkel [in sitcom *Family Matters*]. Writers created the lines and the personality and Jaleel helped bring it to life. And in those days, even the animation itself that was possible in television far surpassed the limitations of videogames of the time.

real challenge. We had an upper limit on how fast we could physically scroll the screen, so Sonic could never move as fast as we wanted him to. Having the boost pads and bumpers helped, but he definitely moved slower in *Sonic 3D* than any other *Sonic* game. In *Sonic R*, the whole point of the game was racing, so the feeling of speed could really be focused on. In that game, the rings were very important as they would open up boost gates and secret short cuts, so the rings were used like a currency to 'buy' short cuts for better lap times."

The Saturn had some incredible games, of course, but if ever a console needed its star attraction it was this one. Up against the spectacularly popular PlayStation, the Saturn really needed every advantage it could get, and particularly after the world-changing brilliance of *Super Mario 64*, everyone expected *Sonic* to make the transition from pixels to polygons in style. It never really happened on the Saturn, but *Sonic* did eventually go 3D in the following generation, and Sega wasted virtually no time getting the game out there, launching *Sonic*

Developer Quotes

"Growing up, I was a hardcore Nintendo fanboy. The Genesis changed all that and made me an overall videogame fan instead of a one-console fanboy, which is a really silly way to be, but that's another article. I loved character platformers, so when *Sonic* came around with that crazy blast processing and insane speeds I was hooked. Loved the look, style and play, and it had a huge influence over my first commercial success – *Jazz Jackrabbit*!"

Cliff Bleszinski, creator of Jazz Jackrabbit

Sonic R
Saturn | 1997
A cracking Saturn game and one that succeeded because it offered something different. *Sonic R* was a 3D racer that pitted familiar characters against one another. Oddly enough, this wasn't developed by Sonic Team but rather by British developer Traveller's Tales.





Sonic Adventure
Dreamcast | 1999
After the demise of the Saturn, Sonic returned faster and sleeker than ever. Determined to make the Dreamcast a success, Sonic Team did everything to ensure that *Sonic Adventure* was a big adventure that ably demonstrated the technical proficiency of the new console.

Sonic Pocket Adventure
Neo Geo Pocket Color | 1999
'Anything but the GBC' must have been the cry at Sega when it decided to make another portable edition. Taking elements from *Sonic 2* and *3* as well as bolting on a link-up option where you could race against your friends once again showed the prowess of Sega.





Sonic Shuffle
Dreamcast | 2000
Hot on the heels of *Sonic Adventure* came *Sonic Shuffle*, a collection of puzzle games not unlike *Mario Party*, which must have partly inspired Sega's stab at the genre. It was a fairly dire experience but it was capped off with some lovely cel-shaded graphics.

Sonic Adventure 2
Dreamcast | 2001
By now the Dreamcast was all but gone, but it didn't stop Sonic Team releasing one last *Sonic* game on a Sega console – it was Sonic's tenth anniversary and it would have seemed rude not to. However, this wasn't the last we'd see of the Blue Blur…





The Special Stages

One of the most memorable parts of the early Sonic games are the hidden stages that featured completely different gameplay to the main adventures



SONIC THE HEDGEHOG

The original special stage isn't exactly the best, but it is still fun. In it you control a curled-up Sonic as he bounces around a rotating maze, trying to get to the Chaos Emerald in the centre while avoiding the exits. The same special stage also appeared in *Sonic The Hedgehog 4: Episode I*.



SONIC THE HEDGEHOG 2

Definitely the most popular special stage of them all, this one saw Sonic and Tails running straight down the screen along a half-pipe, collecting rings and avoiding bombs. It was a technical marvel at the time, creating a sense of 3D depth that was rare on the Mega Drive.



SONIC THE HEDGEHOG 3

Continuing the trend of 3D bonus stages, *Sonic 3*'s effort asked you to run around a globe and walk over the top of coloured balls in order to change them from blue to red. Hit a red ball, however, and Sonic would bounce off, often straight into trouble. This stage was also in *Sonic & Knuckles*.



SONIC CD

Making great use of the Mega-CD's sprite-scaling abilities, *Sonic CD*'s special stage was basically a 3D open world in which Sonic could run in any direction, in order to hunt down and destroy robots. Another technical marvel, this was just one of many things that made *Sonic CD* special.



SONIC 3D

The Saturn version of *Sonic 3D* featured a special stage that was very similar to *Sonic 2*'s, but the Mega Drive edition was more original, using sprite rotation to create platforms for Sonic to use to reach the end. Though they looked great, these stages suffered from some unfortunate pop-up.

Developer Quotes

"I first saw it when shown to me by a journo mate – same guy who brought me a NES and *Super Mario* one weekend, which really was a life-changing event. I remember being impressed by the bright colours and the speed. It seemed ridiculously fast, especially compared to *Mario*. It was obviously Sega's reply to Mario, attempting to establish a similarly iconic main character with an excellent platform game. I liked that they didn't try simply to ape *Mario*, but distinguished *Sonic* with detailed environments, big areas and the speed. *Sonic 2* remains my favourite, though!"

Jeff Minter, developer of Tempest 2000

Adventure alongside the Dreamcast in America and Europe.

Sonic Adventure was a bold new direction for Sega's mascot, and though far from perfect, it was an interesting update after so many years of anticipation. Sonic Team could have easily settled on a simple 3D interpretation of the classic *Sonic* games but went so much further, incorporating many contemporary ideas such as vast explorable areas in addition to its linear, rollercoaster-like levels. The focus was also broadened far beyond Sonic himself, allowing control of six different characters, all of whom had their own adventure and style of play. A great idea in theory, this proved successful from a game design perspective but didn't exactly make *Sonic Adventure* popular with those who didn't like the series' ever-expanding cast.

> **"The rise of the Mega Drive days, the big comeback on the Dreamcast followed by a low point and ultimately the modern era's focus on classic values"**

Sonic Adventure also divided fans by lending a voice to its characters, almost turning the game into an interactive cartoon. American voice actor Ryan Drummond portrayed Sonic and recalls the loose approach that Sega took towards defining

Sonic Timeline

A quick guide to Sonic's most memorable games… and a few others

Sonic Advance

Game Boy Advance | 2001

Having spurned Nintendo's GBA in favour of less popular handhelds, it was great to see the little fella finally getting the small screen attention he deserved and, best of all, it was an all-new adventure, which drew upon elements from all his previous outings.





Sonic Advance 2

Game Boy Advance | 2002

Having become one of the bestselling GBA titles, it was a pretty safe bet that Sega would ensure that *Sonic* would return. Not only is this a better game than the original GBA outing but it also introduces us to the rather oddly named Cream the Rabbit…

Sonic Battle

Game Boy Advance | 2003

A woefully bad fighting game, *Sonic Battle* tried to cash in on the popularity of Nintendo's *Super Smash Bros* series on a system that wasn't nearly powerful enough to pull off a game of that calibre. This is one *Sonic* spin-off game that's best avoided.





Sonic Pinball Party

Game Boy Advance | 2003

A fun little pinball sim that also happened to feature tables based on other Sega fan favourites *NiGHTS Into Dreams* and *Samba De Amigo*. *Sonic Pinball Party* wasn't quite as clever as the Mega Drive's *Sonic Spinball*, but it was still pretty good fun.

Sonic Heroes

Multi | 2003

Sonic made his cross-platform debut in style with this underrated platformer, which played like *Sonic Adventure 2* but with a new system that saw three characters teaming up at once. Players had to swap between all three to overcome the game's challenges.



such an important part of the character. "At the audition, there was a picture of Sonic hanging up in the voiceover booth," he remembers. "The direction I got from the studio engineer was more of a question: 'If you heard a voice coming out of that blue hedgehog, what would it sound like?' I knew Sonic was all about energy and speed and youth, so I just thought it over, opened my mouth, and that's what came out. I remember that I didn't have time to rehearse it. I didn't even know what the voice was going to sound like until I was actually doing it into the microphone for the Sega folks. It just happened."

Sonic himself also got a complete overhaul with *Sonic Adventure*. Redesigned by Yuji Uekawa, a Sonic Team veteran with experience dating back to *Ristar*, the new Sonic was a much edgier creation. Taller, slimmer and somehow spikier, he'd lost a little of his friendliness but made up for it with an anime-style cool. This is the Sonic that has remained ever since, though the games have been wildly different.

Part of the reason for this was Sega's switch to multiformat development. After abandoning the Dreamcast, the company had to take Sonic to new frontiers, creating games for Microsoft, Sony and Nintendo formats for the first time. Our hero probably felt most at home on Nintendo formats, which had a similar user base to that of the Dreamcast, so both *Sonic Adventure* games were quickly ported to the GameCube, in addition to the friendly and colourful new *Sonic Heroes*. But Sega also made some rather unfortunate assumptions about its new audiences. The huge Western focus of the Xbox and PlayStation 2, for example, led Sonic Team to believe that the consoles' owners would prefer a moodier, more violent *Sonic* game, and so the developer created the terribly misguided *Shadow The Hedgehog*, in which Sonic's nemesis embarrassingly wields two handguns and drives a truck.

"As he became more 'hip with attitude', Sonic became faster and faster," notes Christian Senn of this later period of *Sonic* history. "I think it was good to push boundaries, explore new avenues, and learn what worked and what didn't so that successive games could improve. One element I think had a difficult time translating into 3D was the precision control offered in the 2D games. Pushing more towards blinding speed and combat seemed to be a trend, as well as introducing many new characters. Some amazing environments, visuals, gameplay mechanics and special effects have

Developer Quotes

"I bought a Genesis during my early days at LucasArts, and I still keep it hooked up. I have only a dozen games for it now, and two are *Sonic The Hedgehog*. The first one came with the machine. I'm not sure if I, an allegedly cool and sophisticated 20-something, would have purchased a platformer about a cute animal, but there it was, so I gave it a whirl. It was highly addictive, and I played it relentlessly. I liked zooming around, flinging myself into the air – in fact, my enjoyment of *Sonic* was not unlike my enjoyment of pinball. If I close my eyes I can still hear the jingling sound of rings."

Dave Grossman, Telltale Games



» [Dreamcast] Some series fans still can't utter the name 'Shadow' without shuddering.



» *Sonic Spinball* was turned into a rollercoaster at Alton Towers, where it remains today.



Sonic Advance 3
Game Boy Advance | 2004
The final GBA game focused on the interplay between Sonic and his co-stars. A tag system allowed you to swap between two characters on the fly, a bit like *Donkey Kong Country*, while various pairings unlocked different abilities depending on the combinations.

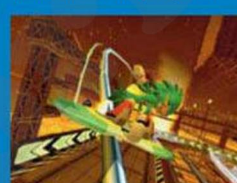
Sonic Rush
DS | 2005
After showing a terrible over-the-shoulder *Sonic* DS demo at E3 2004, Sega went back to the drawing board and returned with this effort. Its major innovation was the use of two screens for huge loops and other fun bits of level design.





Sonic Rivals
PSP | 2006
Though it looks like a platform game, *Sonic Rivals* is actually a pretty clever side-scrolling racing game. It's also, strangely, the first *Sonic* game to break with its roots and not be released in Japan, but don't let that put you off. It's actually pretty decent.

Sonic Riders
Multi | 2006
Yet another *Sonic*-themed racing game, this one used the same engine as the Sega-developed *F-Zero GX* and saw Sonic and chums riding hoverboards. Sadly, it was total rubbish and spent more time firing you into walls than anything else.





Sonic The Hedgehog
Multi | 2006
Sonic arrived on HD consoles in a game that looked promising and was reminiscent of the original *Sonic Adventure*, only far inferior in quality. This unfortunate reboot is the main reason that people assume all modern *Sonic* games to be rubbish.

been created throughout the years that really did appeal to me."

It's quite fashionable to write off all modern *Sonic* games as rubbish, but the truth is that they've been of varying quality, ranging from abysmal to brilliant. The 2006 version of *Sonic The Hedgehog* was a total disaster, featuring some really dodgy gameplay and a worrying relationship between hedgehog and human girl. And then there's *Sonic Unleashed*, an initially promising platform game that absolutely ruined itself with a series of awful beat-'em-up levels in which Sonic transforms into a sort of werewolf thing with big stretchy arms. But then there's *Sonic Rush*, a fun little 2D platformer with the added bonus of skating-style grinds and tricks that actually fit very comfortably into the regular gameplay. Or even the recently released *Sonic The Hedgehog 4* and *Sonic Colours*, both extremely playable platform games that happened to ditch the furry friends.

"I've got to say that *Sonic* has always worked best in 2D, in my opinion," says Jon Burton of Traveller's Tales. "I also think that the character from *Sonic Adventure* onwards changed, and I didn't like it as much. The cameras in those games I found really hard work compared to something like *Mario 64* as well. Personally, I think a blend of what we do in the *Lego* series of games and the traditional 2D *Sonic* gameplay style would make for an amazing game. You have my number, Sega…"

Tyler Sigman, lead designer on *Sonic Rivals*, agrees: "The franchise has definitely changed, but that's something to be expected. In *Sonic*'s case, I'd say it's a bit of a victim of its own success. What I mean by that is that *Sonic* is a great 2D side-scrolling platformer franchise. I think the translation to 3D has had more misses than hits. That's not to say they are all terrible, but the quality has varied a lot and in general I think it remains a better side-scrolling game than over-the-shoulder game."

It's certainly true that the best *Sonic* games of recent years are the ones that play in the traditional style, but you can't ignore the fact that some of the worst are also the ones with the most unnecessary additional characters. Shadow the Hedgehog, Silver the Hedgehog, Big the Cat, Cream the Rabbit, Blaze the Cat and Rouge the Bat… All were unnecessary and all annoying. Thankfully, Sega seems to have finally realised this and has mostly relegated them to ensemble pieces like *Mario & Sonic At The Olympic Games* or *Sonic & Sega All-Stars Racing*, keeping the platform games focused purely on Sonic himself. Or Sonic *themselves*, if the latest game is anything to go by.

Designed to celebrate Sonic's 20th anniversary, *Sonic Generations* was an excellent outing that teamed Sonic up with the 1991 version of himself, taking the series full circle with both completely 3D and 2D levels depending on which Sonic you choose to play as. It's not only a great game in its

Developer Quotes

"Up until the point where I had moved out on my own, I had been primarily a Nintendo fan, at least in regards to home consoles. My NES had carried me through high school and college, as the Master System hadn't quite done it for me. This changed when *Sonic* arrived on the Genesis. As a young man with little money, struggling with new-found responsibilities, it took careful consideration to determine what games I'd buy, but there was no getting around it: I had to have this amazing, impossibly fast blue creature running amok. Sonic was the character who turned me into a Sega fanatic."

James Mielke, Q Entertainment



» [Mega Drive] *Sonic 3D*, while flawed and not truly 3D, was a reasonable attempt at bringing Sonic into the third dimension.

Sonic Timeline

A quick guide to Sonic's most memorable games… and a few others

Sonic Rivals 2
PSP | 2007

Sonic Rivals 2 was pretty much more of the same as last time out, except that it expanded the cast of playable characters from five to eight. Each character was also paired off with a team-mate who would run behind them, harking back to *Sonic The Hedgehog 2*.





Sonic Rush Adventure
DS | 2007

A fairly unsuccessful sequel, *Sonic Rush Adventure* spoiled its otherwise excellent gameplay by implementing totally unnecessary seafaring sections, reminiscent of the similarly divisive sequences in *The Legend Of Zelda: The Wind Waker*, only much worse.

Sonic And The Secret Rings
Wii | 2007

Sonic has had a fairly good run of games on the Wii, and his debut on the system was very good indeed. An over-the-shoulder platform game, it made good use of the Wii Remote's tilt controls for a fast and intuitive rollercoaster ride of an experience.





Sonic Unleashed
Multi | 2008

Titled *Sonic World Adventure* in Japan, this 3D *Sonic* game promised to revitalize the series by mixing *Sonic Adventure*-style 3D gameplay with more classic 2D assault courses. But it ruined all that by adding 'werehog' sections with tedious beat-'em-up gameplay.

Sonic Chronicles
DS | 2008

The first and only *Sonic* RPG, *Sonic Chronicles* was actually made by BioWare, the Canadian studio behind high-profile RPGs like *Mass Effect* and *Dragon Age. Chronicles* wasn't quite up to its usual standard but was one of the better *Sonic* spin-offs produced.





Sonic's Cameos

Sonic is so famous, he's even appeared in a bunch of other characters' games too. Here are some of the most notable



RAD MOBILE
This 3D arcade racing game from AM2 and Yu Suzuki features a Sonic-shaped air freshener hanging in front of the windscreen. Interestingly, this was actually the first appearance of Sonic, predating his Mega Drive debut by about six months.



SOLEIL
A Mega Drive RPG with similarities to *The Legend Of Zelda*, *Soleil* features a scene in which Sonic can be found sunbathing on a beach with his feet up. All that running around, defeating Dr Robotnik, must tire him out.



DONKEY KONG COUNTRY 2
Years before Sega and Nintendo made friends, the latter took a swipe at Sonic here. The ranking screen features a number of famous Nintendo characters but alludes to Sonic and Earthworm Jim in the category of 'No Hopers'.



CHRISTMAS NiGHTS
This free Christmas-themed edition of Sonic Team's *NiGHTS Into Dreams* allowed you to collect several interactive Christmas gifts within the game, including one where you could play the game as Sonic and fight a huge, round Dr Eggman boss.



SUPER SMASH BROS BRAWL
After years of rumour, Sonic finally got to fight his rival in the Wii's *Super Smash Bros Brawl*, and he even got his own stage based on Green Hill Zone, with a newly rearranged version of the Angel Island Zone theme from *Sonic 3*.

> **"Sega wanted its own Mario; a character to help shift consoles. What it got is a character that has helped Sega through good times and bad"**

own right, but it also effortlessly captures the spirit of Sonic's earlier 16-bit adventurest.

If you were to summarise the career of Sonic over these past 21 years, you could definitely say that he's lived an interesting life. The meteoric rise of the Mega Drive days, the explosion into popular culture, the wilderness years of the Saturn, the big comeback on the Dreamcast followed by a low point of mediocrity and over-saturation and ultimately into the modern era and its focus on quality, experimentation and classic values. It's definitely, appropriately, been a series of ups and downs, even loops. But it's testament to Sonic's enduring popularity that he's managed to bounce back from any low point in this time. So many Sega franchises have been lost to the annals of history, and even the company's own hardware business is long since expired. But Sonic lives on. Sega wanted its own Mario; a character to help shift consoles. But what it got is something slightly different; a character that has helped Sega through good times and bad and has gone on to become a hero to all gamers, no matter which console they happen to own.

Developer Quotes

"The first time I heard about *Sonic* was when someone commented that it was overrated and that the music was pretty bad. It motivated me to rent a Mega Drive and check it out for myself. Having a new console for a day was quite a special experience and I played the game until it had to be returned.

"I don't think I finished it, but I remember being impressed by the special stages and the loops. I did not fall in love with the game that day, although I feel a connection with the character since then and I've wanted it to be awesome for the last 20 years. Perhaps *Sonic Generations* will be?"

Collin van Ginkel, co-founder Two Tribes



Sonic And The Black Knight
Wii | 2009
One of the more derided modern *Sonic* games, *Sonic And The Black Knight* is actually much better than it's given credit for. Set in a medieval fantasy world, it re-imagines the *Sonic* characters as knights of the round table and equips them all with swords.



Sonic The Hedgehog 4: Episode I
Multi | 2010
Returning to the series' roots, this completely 2D game starred only Sonic himself and played fairly close to the style of the original Mega Drive trilogy. Only some slightly stodgy physics stopped it from being perfect.



Sonic Colours
Wii | 2010
One of the best *Sonic* games in recent years, *Sonic Colours* featured mostly side-on gameplay as well as collectable Wisps that temporarily change Sonic's abilities. It almost played like a cross between *Sonic Adventure 2* and *NiGHTS Into Dreams*.



Sonic Colours
DS | 2010
The DS version of *Sonic Colours* went even further than the Wii version in its drive to return to a more classical 2D style of *Sonic* gameplay. Some people even believe that it's the superior version of the two… and they happen to be correct.



Sonic Generations
Multi | 2011
It was a long wait, but *Sonic Generations* is arguably one of the best 3D *Sonic* games that's currently available. It's a clever mash-up of both classic 2D *Sonic* and more modern day efforts and even features the original game as an unlockable extra.

The Making Of Sonic Adventure

We caught up with Takashi Iizuka, the current head of Sonic Team and a Sega veteran since 1991, to talk about one of his most important productions that was released for Sega's 128-bit Dreamcast, 2001's highly enjoyable Sonic Adventure

Retro Gamer: What was the biggest difficulty you faced in creating a 3D *Sonic* game?
Takashi Iizuka: Even Sonic Team had never seen a 3D *Sonic* game at that time, as they'd only worked on the Mega Drive games. I had a vision of what a 3D *Sonic* would look like; I could see it in my mind, but none of the other team members could imagine it. So my main difficulty was educating the team on what exactly the game would be, answering their questions and giving them direction.

RG: How much pressure did you feel internally at Sega and from the fans?
TI: Because there were no *Sonic* games on Saturn the gap between the Mega Drive games and *Sonic Adventure* was a very long time, so I felt a huge weight of expectation from the fans. Internally at Sega, *Sonic Adventure* was a huge project for the company and just kept increasing in size, so the pressure was immense and grew by the day. But once we got to a certain point in development when everyone could see the game coming together and the development team gained confidence, Sega management were really able to visualise what we were working toward and the pressure started to ease off.

RG: Did you always intend to use voice actors and how did you go about casting them?
TI: Yes, it was planned from the beginning. The title of *Sonic Adventure* was always there from the start because we wanted the game to have a big, epic feel. Because it was to be more story-focused it only made sense that the characters would speak to each other. As for the casting, because nobody had ever heard Sonic speak, even on the dev team, there were a lot of differing opinions between the staff on what he should sound like. We all had a voice that we imagined in our mind, but the part we agreed on was that we shouldn't be using an anime voice actor and that we should be targeting a Japanese actor with movie experience. When you see a Hollywood movie, there is often a professional Japanese actor speaking over the top and we decided that we wanted that type of actor rather than an animation actor.

RG: Why did you decide to introduce the adventure scenes in addition to the platforming?
TI: In the previous *Sonic* games he could only ever go forward or backward, but in a 3D game

» [Dreamcast] Knuckles' hunting for emerald shards was one of the gameplay styles in *Sonic Adventure* to survive into the sequel.



Sonic Through The Ages

Sonic Generations brings Sonic full circle as his early design makes a comeback



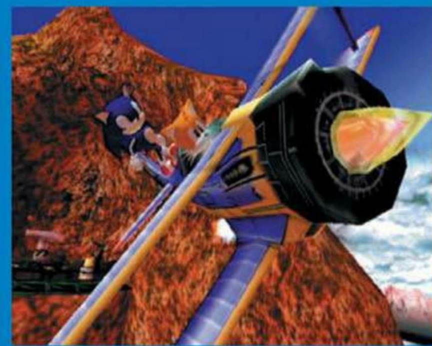
he could travel in all directions and we felt like we had to make use of that space. Platforming was still what made a *Sonic* game a *Sonic* game, but we now had this new dimension to play with and we had to think how we could make the best use of it. And that's where we came up with the adventure parts, giving the player an element of discovery in addition to the platforming.

RG: The musical style is quite different to the old games, more focused on rock songs with vocal tracks. What was the reason for that?
TI: Just from a technical perspective, we had more space available on the disc so there was space for better graphics and voice acting and, of course, better music. We were previously limited to the FM chip in the Mega Drive, but now we had limitless potential, so we wanted to take advantage of it with vocal music tracks. We picked the rock style because a major part of the plot, the Chaos theme, was not present in earlier games and we wanted to reflect that in a darker, heavier style of music.

RG: Where did the Chao idea come from?
TI: The Chao concept was influenced by the Nightopians from *NiGHTS*. The idea was to have something that changed every time you came back to the game. So we had the high-speed gameplay of Sonic but we also had something slower and more thoughtful in the Chao gameplay.

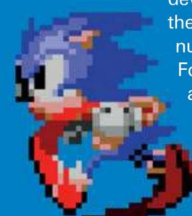


» [Dreamcast] By keeping Sonic's stages largely on-rails, the team made the best of *Sonic* gameplay in a 3D world.


» [Dreamcast] The shooting sections, as well as being graphically incredible, played in a way that was reminiscent of classic Sega coin-ops.



RG: *Sonic Adventure* and its sequel are still well-regarded as the best 3D *Sonic* games. Why do you think that is?
TI: It's hard to say why they're so well-regarded. But for *Sonic Adventure*, it was an ambitious project and the team tried lots of ideas and crammed it with as much content as we could. When it came time to make the sequel we looked at the first game and realised that there were a few elements that didn't need to be there, so in *Sonic Adventure 2* we concentrated only on the concepts that were necessary. The sequel is a much more refined and composed version of *Sonic Adventure* and, in a way, I think that it's one of the better-made *Sonic* games and the closest we've come to a perfect 3D *Sonic*.



"The sequel is a much more refined version of Sonic Adventure, and, in a way, I think that it's the closest we've come to a perfect 3D Sonic"



RG: How did you feel about the Dreamcast at the time, and how do you look back at it now?
TI: *Sonic Adventure* was the launch title for Dreamcast and that meant that we were developing the game in conjunction with the console itself. We were able to make a number of requests to the hardware team. For example, to make the game as good as possible we had to go to the hardware team and request even more RAM be added to the Dreamcast. There was a lot of discussion between the hardware and software teams. Because the Dreamcast is a console that was brought to life alongside *Sonic Adventure*, it feels to me that the two are intrinsically attached to each other. I have a lot of special emotions towards the Dreamcast and I still believe that it's a very good piece of hardware. Because I was technically involved in the production of that hardware I have nothing but warm feelings when I look back at it.



2003 | 2006 | 2008 | 2009 | 2010 | 2011

THE CLASSIC GAME



Geoff Crammond is well-known for his racing simulators, from Formula Three BBC Micro hit *REVS* through to his popular *Grand Prix* series on the PC. For a brief moment in 1989, however, Crammond dispensed with the realism and instead decided for one glorious game to answer the following question: What would happen if someone decided to merge drag racing and rollercoasters?

The result is one of the greatest racing videogames of all time, tasking you with flinging your rugged racing car around eight perilous circuits, aiming to avoid killing yourself in the process. Join Craig Grannell on the starting grid as **Retro Gamer** explores this classic Amiga game.



THE NEW BOY

You begin the game as a newcomer, down in Division 4, battling also-rans. On the plus side, the game at least enables you to use your own name and not be Mr Anonymous.



ROAD HOG

When John Major left politics, he entered the dangerous world of racing (or so it would seem); Road Hog's easy to beat, though – use boost to zoom past on any straight.



DARE DEVIL

Your first major test, Dare Devil (or Spock to his friends) is an adversary in Division 3. Overtake him on a bend, and ensure you don't allow him to ram you off the track.



BIG ED

For some reason that isn't entirely clear, Big Ed likes to wheelie. Wheelies slow you down, but don't seem to affect him, the cheating swine. Leap over him or boost past on a corner.



THE DODGER

Your toughest test in Division 2, The Dodger is a battler. In lower divisions, fall off the track and you'll lose; against The Dodger, you need to avoid any mistakes to win.



HOT ROD

With his blond quiff and shiny teeth you want to punch, Hot Rod looks dashing, but he races like a man possessed. Follow him, then boost, swerve and overtake on the last lap.

MEMORABLE MOMENTS

WHY IS IT A CLASSIC?



It's vrooming great

Videogames are always at their best when they're thrilling and exciting. When based around real-world things, it's the feel that's most important, and yet racers (with a few exceptions, such as *OutRun 2*) these days tend to prefer a kind of 'TV realism'. By contrast, *Stunt Car Racer* is unashamedly an arcade game. It's meant to be fun, and it feels great as you hurl your car round tracks, into corners, and use boost to scream away from opponents. The absurd track design of course adds to the brilliance, providing a unique and exhilarating racing experience.

BEST TRACK



It's a rollercoaster

The Hump Back's undulating track is glorious; The Little Ramp's simplicity is great for speed runs; The Ski Jump is thrilling; The Draw Bridge (including an actual drawbridge that raises and lowers) is totally bonkers. For us, though, nothing beats Division 2 track The Roller Coaster. The circuit is, believe it or not, laid out like a rollercoaster, and bar a first corner that you must take slowly (or you fly right off the track), it's mostly a hell-for-leather circuit that finds you giddily belting down perilous slopes and then boosting up massive inclines.

BEST OPPONENT



Clue: it's not the computer

Stunt Car Racer has a pretty good go at injecting a little personality into the various rivals you face. There are clear differences between the ways the characters behave, and the difficulty curve is reasonable throughout, with drivers in the higher divisions proving much tougher to beat. However, the computer AI never falls off the track (even if you ram your opponent's car) and feels rather robotic when you've played the game a lot. Luckily, you can link two Amigas together and play head-to-head (although each player needs their own Amiga and their own television or monitor).

BEST FEATURE



Damage limitation

Damage modelling is a contentious area of modern racers: too realistic and gamers get frustrated while sponsors moan that 'their' cars are getting ruined on-screen; avoid it entirely and risk-and-reward becomes absent. *Stunt Car Racer* matches its arcade sensibilities with a straightforward yet brilliant car-damage mechanic. Rough landings and collisions result in 'chassis crack' progressing from left to right. Dreadful landings punch holes in the chassis, speeding up the crack's progress, and holes are only repaired at the season's end.

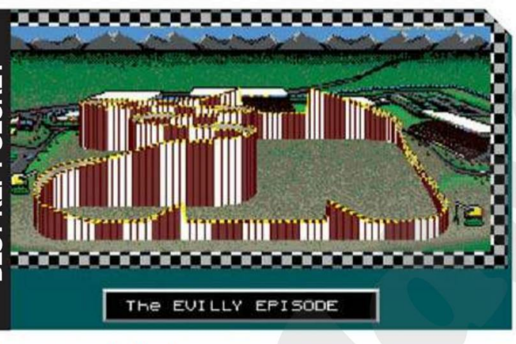
SNEAKIEST SECTION



Acute racing game

Crammond is a devious sort when it comes to track design, and even some of *Stunt Car Racer*'s easier tracks have nasty surprises lurking (try careening round The Hump Back and you'll likely smack into the final corner, for example). Many of the most challenging course components are demanding jumps that force you to be at full speed before launching your car into the air, but our favourite sneaky moment occurs at the end of The High Jump. Immediately after one of the last corners, a straight runs at a 45-degree angle, which frequently catches us out.

BEST-KEPT SECRET



The sequel that never was

In April 2003, *Stunt Car Racer* fans got properly excited when it was revealed Geoff Crammond was working on *Stunt Car Racer Pro*, but it was sadly canned (back in **Retro Gamer 69**, Crammond said: "My business manager calls it the best game he never sold"). However, Amiga owners can at least get a little bit of extra *Stunt Car Racer* magic via AmiGer's The New Tracks patch; the update amends the race colours, adjusts the AI and, most importantly, provides eight new tracks, including Dizzy Descent, Witty Way, Crazy Caper, Amazing Adept and Rat Race.

What the press said… ages ago

Commodore User (Dec '89), 92%

"The graphics are incredible, and that doesn't only apply to the movement of the track in relation to you. It's almost worth losing the race so that you can follow the other car along the track, watching it bounce along realistically. An amazing game, almost perfect in fact. A 'must buy' for all Amiga owners."

Amiga Format (Jan '90), 93%

"This is gripping stuff. Action all the way – you really will be holding your breath as you go flying over the jumps and gritting your teeth with determination when you see your opponent go whizzing past. All it lacks is an instant replay option to allow an out-of-cockpit view of those spectacular crashes."

What we think

With its filled vectors, it might look old-fashioned – even a little *Hard Drivin'* – but *Stunt Car Racer* still provides the goods where it matters: the controls are tight and tuned to perfection, the physics are rugged and enjoyably arcade-like, and the track designs are great.



IN THE KNOW

- **PLATFORM:** AMIGA
- **PUBLISHER:** MICROPROSE/MICROPLAY
- **DEVELOPER:** GEOFF CRAMMOND FOR MICROSTYLE
- **RELEASED:** 1989
- **GENRE:** RACING
- **EXPECT TO PAY:** £5


Macintosh SE
FDHD

The Bluffer's Guide To Mac Gaming:

For years, the Macintosh has been the laughing stock among gamers, perhaps second only to the Virtual Boy, the popular belief being that it's a machine designed only for musicians and graphic artists. Though it's true that it has struggled, the Macintosh has always provided plenty of avenues for the gamer and, as Retro Gamer reveals, has even been home to landmark moments



It's ironic that with all the claims over the years that the Macintosh has no games, it was in fact birthed thanks to one.

In 1976 Steve Wozniak, co-founder of Apple with Steve Jobs, developed a prototype of *Breakout* for Atari, many features of which would go into the creation of the Apple II, such as graphics and sound circuitry. This eventually led to the development and release of the original Macintosh on 24 January 1984, a fact referenced years later in Mac System 7 with a secret *Breakout* clone hidden in the OS.

This original Macintosh, released at the price of $2,495 US, was designed to provide competent graphical performance at a reasonable price, aiming for the home market. It was powered by an 8MHz Motorola microprocessor and 128KB of RAM.

The included keyboard lacked arrow, numeric and function keys, which was a deliberate choice as Apple wanted software designed for its fancy GUI, not lazy ports from other systems, though all keys would be added on later keyboards. It was also the first personal computer with a floppy drive that took 400KB 3.5-inch disks. But perhaps most notable was the inclusion of a mouse and graphical user interface.

The Xerox Alto GUI was a strong inspiration for the latter, so much so that Apple faced much criticism when it tried to sue companies that later modelled GUIs after Mac OS. The Macintosh was, however, the first commercially successful personal computer to include these features.

At first, Apple avoided games on its new machine amid fears that it would be perceived by the public as a toy due to the two previously mentioned features, rather than a big, serious productivity machine. Despite this, a simple sliding puzzle application written by Andy Hertzfeld, aptly titled *Puzzle*, was included with the first public release of what would become Mac OS. That's right: there have always been games on the Macintosh, dispelling the myth of the opposite immediately.

Of course, it was hardly anything to show off to your work chums, but the first commercial game also wasn't far away. In fact, it was released the same year as the Macintosh. Originally called *Alice* and later retitled *Through The Looking Glass*, it was a new take on chess similar to *Archon*, which demonstrated the potential of the system with an impressive 3D board and scaling sprites.

It was a commercial failure, partly due to Apple's reluctance to market it. Meanwhile, few other games were released for the first Macintosh, primarily because of the low RAM and lack of expandability – one of the design choices that kept the price down. The former was quickly rectified with the Macintosh 512, released on 10 September 1984 and, as the name suggests, with the RAM expanded to 512KB.

GAME ON

In these early days the Macintosh generally received black-and-white ports of slower-paced games, namely RPGs and adventures. Among the ported were the *Wizardry* series, *SimCity*, the *Bard's Tale* series, *Wasteland*, *Karateka*, *Defender Of The Crown*, *Leisure Suit Larry*, *The Hitchhiker's Guide To The Galaxy*, *Might & Magic*, *The Last Ninja* and many, many more.

But the Macintosh didn't just get ports. In fact, there were a few revolutionary original titles released on the system. A lot of these breakthroughs were due to the fact that the Macintosh was the first successful computer where the GUI and mouse was a necessity rather than an accessory.

For example, *Dark Castle* was the first game to employ the WASD keys for movement while using the mouse for aiming, predicting the preferred setup for first-person shooters. A contributing factor to this creation was the lack of arrow keys on early keyboards.

Bus'd Out is an early example of a networked first-person shooter, though hardly the first, and *Déjà Vu* used an innovative GUI that would inspire the LucasArts SCUMM engine. The Mac







The Apple Crunch

MOST MACINTOSH MACHINES feature famously – or infamously, depending on your outlook – closed architecture, so there hasn't ever been much of a market for third-party sound cards. Instead, Mac fans have had to depend on what Apple provided them with.

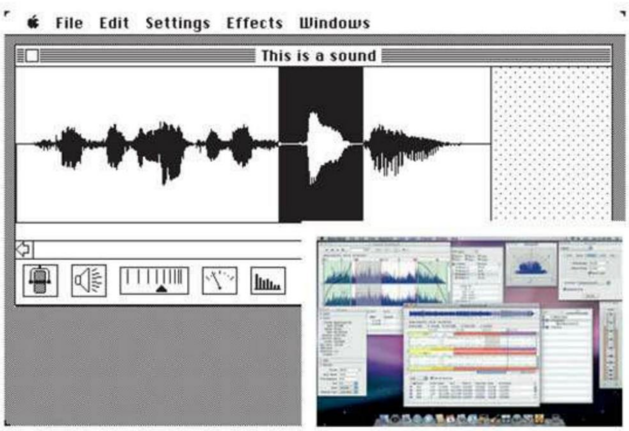
The original Macintosh was capable of mono 8-bit sound and 22MHz sampling. Later models such as the Macintosh II would introduce stereo output. This technology, in addition to the point-and-click interface of the OS, led to Digidesign launching the first digital audio workstation system for the Mac in 1989.

Titled Sound Tools (later Sound Designer), it was described as the first tapeless recording studio by the company. This was used to edit audio samples for sampling keyboards, and soon went on to be used for simple two-track audio editing and CD mastering. The Macintosh would continue to this day to be a crucial part of many recording studios.

Of course, this technology also allowed high-quality sound in games, such as many crisp voice samples heard in *Dark Castle* way back in 1986.

Over the years various small additions and changes would occur to sound hardware, most being of little use to the casual user but incredibly valuable to audio engineers, such as anti-aliasing filters and analogue-to-digital converters for sound input.

It wasn't until the original Quadra's release in 1991 that the Macintosh finally received 16-bit sound output.



also played host to the first CD-ROM game, Cyan's *The Manhole*.

The Colony, a first-person action-adventure, was among the first of its kind to allow players to move around in real-time 3D and was also the first to feature vehicles that could be driven.

A number of classic games also originated on the Mac. *Shufflepuck Café*, the unique science fiction air hockey game, was a Mac original again, primarily thanks to the mouse. Cliff Johnson's meta-puzzler, *The Fool's Errand*, was another Mac first, as was Chris Crawford's geopolitical simulator, *Balance Of Power*.

The Mac was even gifted with a few exclusive games from these greats. Johnson released *3 In Three*, a tale about a number 3 lost in a computer with less traditional puzzles than *The Fool's Errand*. Crawford released *Trust & Betrayal: The Legacy Of Siboot*, an incredibly original game about forming trust with NPCs and deciding what one should do with that power.

Infocom even released an exclusive game on the system in the form of *Quarterstaff: The Tomb Of Setmoth*, an RPG that made extensive use of Mac OS's GUI capabilities.

Things progressed smoothly on the technology side too. The Macintosh II was the first one to feature colour in 1987, and the Quadra line was introduced on 21 October 1991 with the Motorola 68040 CPU. The first 700 and 900 models ran at 25MHz, with memory that could be expanded to 64MB. CD-ROM drives also became available, the first built-in one included in the LC 520, released in June 1993.

With this spiffy new CD technology, new games emerged to take advantage of it. *Spaceship Warlock* was released in 1991, being one of the first designed specifically for the medium. The creators would later develop the sadly ignored multimedia extravaganza *Total Distortion*.

Cyberflix created technology allowing data to be streamed from CDs at speeds fast enough to play games such as *Lunicus* and *Jump Raven* straight from the disc, something previously considered impossible for action games.

Then, of course, there was *Myst* in 1993, which, together with *The 7th Guest* and *Star Wars: Rebel Assault*, would become a killer app for CD-ROM drives. *Myst* has also been accused of being the killer of the adventure genre. Whether this is true or not is still debated, but one thing that is for certain is that it helped sell a lot of Macs and paved the way for the vastly superior sequel, *Riven*.

ROTTING APPLE

But this wasn't enough. With the release of Microsoft Windows 3.0 in 1990, which offered similar functionality and at a cheaper price, the Mac was rapidly losing market share. Apple was also confusing consumers with too many similar models on the market at the same time. This only got worse during the mid-Nineties with Windows 95. With this dwindling popularity, many game companies abandoned the system, and the ones that stayed had

From monochrome to millions

THE ORIGINAL MACINTOSH had a built-in display, which was a 1-bit black-and-white 9-inch CRT, with a resolution of 512x342, establishing the desktop publishing standard of 72 pixels per inch.

Yes, it lacked colour, but it did allow some wonderfully detailed visuals first seen in *Through The Looking Glass*, and many fans find a certain charm to the aesthetic.

This standard would continue until March 1986 with the release of the cunningly named Macintosh II, pictured on the right. It shipped with a number of exciting new features, such as expandability and a new Motorola microprocessor that helped make it the first 32-bit Macintosh.

The most notable change, of course, was the addition of colour. A whole 256 of them displayed at 640x480 resolution on a beautiful 13-inch monitor, to be precise. But this was only with the default hardware. With a graphics card expansion, it was capable of displaying a whopping 16.7 million colours, providing photorealistic visuals. As with all new exciting technology, one of the first uses of this was, of course, digital pornography.

If all this weren't enough, it was also the first computer in history to support multiple monitors. All these things put the Mac far ahead of IBM when it came to visuals for many years to come.

In 1991, the Quadra line was released, bumping the maximum resolution to a huge 1280x1024, which remains a standard today.







to deal with problems such as tiny, if any, shelf space.

Gamers themselves became a problem, with piracy and the popularity of file-sharing programs such as Hotline, despite the fact that a Mac user pirating games was like a starving man eating his own head for sustenance. Even hardware wasn't safe, with some users using third-party Mac drivers for PC video cards, rather than shelling out the extra cost for ones designed specifically for Apple's machine. Even crazier, a hobbyist managed to obtain the source code to *Quake* and ported it to Mac OS for the hell of it, indirectly damaging sales of the commercial port released later.



» [Mac] *Nanosaur*'s launch coincided with the original iMac, showing that Apple was positioning it as a gaming platform.

"Apple wanted software designed for its fancy GUI, not lazy ports from other systems"



Other companies tried to capitalise on Mac gamers' cravings for games. Insignia Solutions released SoftWindows, an emulator of x86 hardware that allows Microsoft's OS to run on Macs. Orange Micro even released a PC card designed specifically for playing PC games on a Mac called PCfx!. These solutions were last resorts, however, as Mac users wanted games that offered the usability and functionality of their OS of choice and avoid listening to the Windows 95 startup sound, which tended to upset canines.

Despite these problems, there were those who stayed and fought. Blizzard, Bungie, Changeling, Graphic Simulations, LucasArts, MacPlay, MacSoft, Parsoft Interactive and Starplay Productions got together and formed the Mac Entertainment Software Association (MESA), and a group of indie developers formed Bunch Media, joining together under the one banner. It was a bit like Gathering Of Developers on the PC, except all the money wasn't spent on extravagant E3 parties.

Still, the flow of games slowly dried up, making it indeed seem as if there were no games on the system, but this did have some advantages. For one, the Mac only got the cream of the crop. Hit PC games such as *Syndicate*, *System Shock*, *Civilization II*, *Command & Conquer*, *Doom*, *Day Of The Tentacle*, *Deus Ex* and plenty more received Mac releases. Additionally, when released – admittedly often quite a lot later than the PC counterpart – they included new features, such as overhauled interfaces or support for higher resolutions.

Wolfenstein 3D was basically completely remade, featuring vastly higher resolution visuals, an enhanced soundtrack, new levels, two new weapons and an auto-map. On the downside, the enemies were always facing the player and didn't patrol areas, unlike in the DOS original.

Descent featured a new Red Book soundtrack, which was so fantastic that Good Old Games now includes it as an extra with the purchase of the game. *Duke Nukem 3D* had a few new features such as being able to record personal taunts and even a Mac-exclusive Easter egg, allowing players to watch the famous Ridley Scott-directed '1984' commercial on the cinema in the first level. Sure, most people would

Back on the Mac

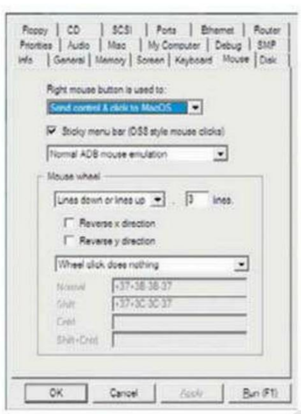
THE MACINTOSH HAS always prided itself on its user-friendliness, so much so that it practically invites the user into bed, and fortunately this is one thing that has carried over to Macintosh emulation. Not only is it easy to set up an emulator; it's also generally not too difficult configuring higher functions such as connecting them to the internet, allowing anyone to play their favourite old multiplayer game or enjoy obsolete browsers and protocols.

To play with Macintosh software on a Windows machine, you only need two things: an emulator and a system disk, neither of which is terribly hard to find. It's also recommended to create a virtual hard drive if you don't want to keep swapping around disk images, though we understand if it's part of the nostalgia. The program HFVExplorer is perfect for this.

There are three main emulators available, and the choice of which to use depends on the era of Macintosh history that you wish to explore.

vMac is best suited for ye olde Macs with black-and-white displays. Plenty of classics can be played on here, such as *Scarab Of Ra*, *Continuum* and *The Colony*. For the later colour-display Macs with 68K architecture, such as the Performa and Quadra range, Basilisk II is a prime choice. Finally, for the PowerPC line of Macs, SheepShaver is at your service.

All these emulators are also available for Mac OS X, allowing modern Mac maniacs to play the classic games of yore.





» [Mac] *Pathways Into Darkness* harnessed the Mac GUI and was developed by Bungie, which would later find international acclaim with *Halo*.

EIGHT IMPORTANT MAC GAMES



MARATHON TRILOGY

» **Released:** 1994, 1995, 1996
» **Publisher:** Bungie Software
» **Developer:** In-house
» **By the same developer:** *Halo*

■ After creating the Mac's answer to both *Ultima Underworld* and *Wolfenstein 3D* with first-person adventure *Pathways Into Darkness*, Bungie took on the might of id Software's *Doom* with the first *Marathon*.

Although it had other features that gave it an identity of its own, the major addition to the genre that *Marathon* brought was an emphasis on story. *Marathon: Durandal* then explored world-building in videogames, before *Marathon Infinity* ended the series with one of the most daring and experimental commercial FPSs ever released. They're playable on modern hardware through the Aleph One fan project.

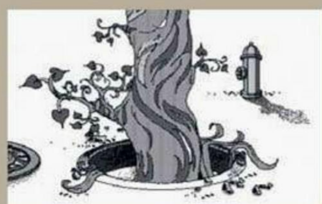
THE MANHOLE

» **Released:** 1988
» **Publisher:** Brøderbund
» **Developer:** Cyan Worlds
» **By the same developer:** *Cosmic Osmo And The Worlds Beyond The Mackerel*

■ Cyan's *The Manhole* is important for several reasons. First, not only was it the first game available on CD-ROM for the Macintosh, but it was the first game available on CD-ROM full stop.

It was also Cyan's first game, though the company labelled it as "explortainment" because there was no goal. Instead, the player was free to explore and play in a surreal fantasy world, with the only aim being to have a blasted good time.

The game's design also led to *Myst*, but don't hold that against it.





ESCAPE VELOCITY

» **Released:** 1996
» **Publisher:** Ambrosia Software
» **Developer:** In-house
» **By the same developer:** *Avara*

■ Matt Burch helped make PC gamers jealous with *Escape Velocity*, an epic space adventure that took the missions, trading and exploration from games like *Privateer*, mixing them up with arcade combat reminiscent of *Spacewar!*.

Players could take part in an expansive story, or just accept smaller missions and live a life of their choice, and that included taking over the entire galaxy.

Additionally, it had strong support for user-created content through an innovative plug-in system, and extensions are still being made for the latest game in the series, *Escape Velocity Nova*, originally released in 2002.

DARK CASTLE

» **Released:** 1986
» **Publisher:** Silicon Beach Software
» **Developer:** In-house
» **By the same developer:** *Airborne!*

■ Despite being a platformer, *Dark Castle* pioneered the WASD plus mouse control method that is now the standard for navigating 3D environments on a home computer game, and it also showed the arcade gaming potential of the Macintosh to the world. It featured detailed animations and comedic voice samples that gave it the feeling of an interactive cartoon and hinted at what would become the cinematic platformer.

Another important aspect was the puzzles. Even if they were often as simple as a Windows user, they gave an extra feeling of adventure to a genre usually lacking brains entirely.



probably rather watch the cheerleader bounce her pompoms, but it was still a nice touch.

There were also plenty of alternative gaming methods available. For example, many games, especially first-person shooters, were expandable, featuring fields of user-created content, such as the Mac-created *Batman Doom* – the creators of which would later create first-person man-thumper *Zeno Clash*.

But there was another huge avenue of gaming that is largely ignored: the shareware and freeware scene. Games of this nature thrived on the Macintosh, partly because of the number of tools available to creators. Things like Apple's HyperCard, which helped popularise hypertext, was used by Cyan while creating *Myst* and required little programming skill. Another was World Builder, an adventure game creator that led to cult classics such as *Radical Castle* and Ray Dunkin's *Maze* trilogy. Ingemar Ragnemalm's Sprite Animation Toolkit also provided support.

Among the most remembered shareware games are *Scarab Of Ra*, a graphical roguelike where the player is an archaeologist exploring a pyramid while being hassled by monkeys; *System's Twilight*, a *Fool's Errand*-esque puzzler taking place in a digital fantasy world; the *Exile* trilogy, a series of sprawling RPGs; and *Avara*, a cult multiplayer FPS involving robots blowing up other robots.

On the shadier side of gaming, there was also a large number of high-functioning emulators available for retro gamers, immediately opening up huge avenues of gaming.

Original Mac games would also continue to be released, including the wonderful *Tempest 2000* meets *Robotron* meets *Sinistar* meets *Defender* arcade game, *Battle-Girl*, though it would later receive a Windows release. There was also, of course, Bungie's *Marathon*, and the company continued to support the Mac with releases of *Myth*, *Oni* and eventually, despite a buyout by Microsoft, *Halo*.

Finally, many older games ran well on modern machines, allowing anyone to dive back into history and enjoy some black-and-white gaming.

"Apple was struggling by this time, and it needed to save itself. And that's just what it did"

SWEET APPLE TALK

It was this era when people accused Apple of ignoring gaming, making no effort to appear at important shows such as E3 and providing little support to remaining game companies. Of course, it was Apple as a company in general that was struggling by this time, and first it needed to save itself. And that's just what it did.

In 1996, Steve Jobs returned to the company he co-founded, and injected it with miracle juice, starting with the famous 'Think Different' marketing campaign and the new all-in-one bondi blue iMac computer, released later in 1998.

But Apple also included high-end games on the iMac, such as Pangea Software's *Nanosaur* and Shiny's third-person shooter, *MDK*. It was telling people that its machine could





» [Mac] *Shufflepuck Café* first appeared on the Mac.



CRYSTAL QUEST

» **Released:** 1987
» **Publisher:** Casady & Greene
» **Developer:** Patrick Buckland
» **By the same developer:** *Carmageddon*

■ *Crystal Quest* was one of, if not the, first arcade games designed specifically for mouse control, and to this day is one of the best, ignoring a terrible Xbox Live Arcade version. It was also the first Mac game to be playable in colour for those with the bottomless pockets required for a full colour setup for their Macintosh II, and it even included a 'critter editor' to allow the design of custom enemies.

What made the gameplay memorable was that it combined frantic arcade gameplay with delicacy, the player having to make smooth mouse movements to avoid collisions due to the game's exaggerated inertia.

THE FOOL'S ERRAND

» **Released:** 1987
» **Publisher:** Miles Computing
» **Developer:** Clive Johnson
» **By the same developer:** *At The Carnival*

■ One of the greatest meta-puzzle games of all time, *The Fool's Errand* is almost too clever for its own good, making incredible use of the videogame medium.

Featuring traditional puzzles such as anagrams and crosswords, it also had more experimental puzzles, including a card game in which the player had to figure out the scoring rules.

Puzzles are tied together with a story, with solutions that feature pictures portraying scenes and clues to other puzzles, or logically leading the player through to the following chapters in the narrative.





GLIDER PRO

» **Released:** 1991
» **Publisher:** Casady & Greene
» **Developer:** John Calhoun
» **By the same developer:** *Pararena*

■ *Glider* was originally a black-and-white arcade game about moving from left to right. *Glider Pro* added colour, expansive levels and a level editor.

It was the original gameplay that hooked players in the first place, though. They guided a fragile paper aeroplane through a hazard-filled house, using vents to elevate while collecting bonuses.

Another memorable feature of the game was the ability to interact with incidental background objects, such as switches that would turn on lights and fans, and even guitars that could be strummed.

BOLO

» **Released:** 1989
» **Publisher:** Stuart Cheshire
» **Developer:** Stuart Cheshire
» **By the same developer:** None

■ Originally appearing on the BBC Micro, the Macintosh version is one of the platform's most fondly remembered multiplayer games, right next to *Spectre*.

Up to 16 players could take their tanks and harvest trees, build bases, plant pillboxes, and form and break alliances, all in order to seize control of the bases on the map. Its network multiplayer implementation was considered revolutionary at the time

'Bolo' is the Hindi word for 'communication', which is fitting since it's a game about talking to the other players, either with words or, perhaps more effectively, explosives.



and would play games. To make sure it could, inside was an integrated ATI Rage IIc processor with 2MB of SGRAM memory and a 233MHz CPU.

Jobs held interviews with various gaming publications, telling them that Apple was going to focus its attention on gaming, providing development tools such as Game Sprockets for developers and making showings at E3. It certainly made progress, but many people believed it wasn't enough, with Apple continuing its habit of one step forward, two steps back and not following through with its ideas.

The release of Mac OS X in 2001 damaged the shareware scene greatly by making lots of older tools unusable, but bigger developers such as John Carmack of id Software would find the operating system inviting, being a nice midway between the flexibility of Unix and the uniform design of Windows. In fact, the first public beta of *Quake III Arena* was released exclusively for the Mac, putting a damper in PC gamers' pants all over the world.

This, combined with the resurgence in popularity of the Mac, started attracting game developers back to the machine. It never even came close to matching the PC in releases, but people could stop fearing a complete death.

In 2006, Apple introduced the new line of Intel Macs, which was a double-edged sword. It made porting games from Windows to OS X easier due to the sharing of hardware architectures, but then why bother when users can just boot into Windows and play games there natively?

Despite all these problems, things are looking better now than they have in a long time. More ports of commercial games have been arriving on the Mac and there is strong support for the machine from indie developers, such as 2D Boy, creator of *World Of Goo*.

The App Store was introduced to the Mac platform earlier this year, which should allow plenty of games to be as easily distributed as they are on the iOS devices. There is concern that it will just be casual games available, but for more hardcore gaming needs, Valve has also released its Steam distribution platform and has started to port its games – including the *Half-Life*, *Portal* and *Left 4 Dead* series – over, making available yet another way for companies to make their games available on the Macintosh.

APPLES TO APPLES

It's been a long, hard struggle for the Macintosh, not just for its games but for the machine in general, surviving against all odds after a short, early reign. However, the future is looking bright.

Was Apple's Macintosh ever a prime machine for gaming? Not particularly. Will it ever be? It's unlikely. But the games have always been there, even if sometimes users had to look for them. Not only that, but occasionally the modest machine even provided gaming experiences that weren't offered anywhere else.

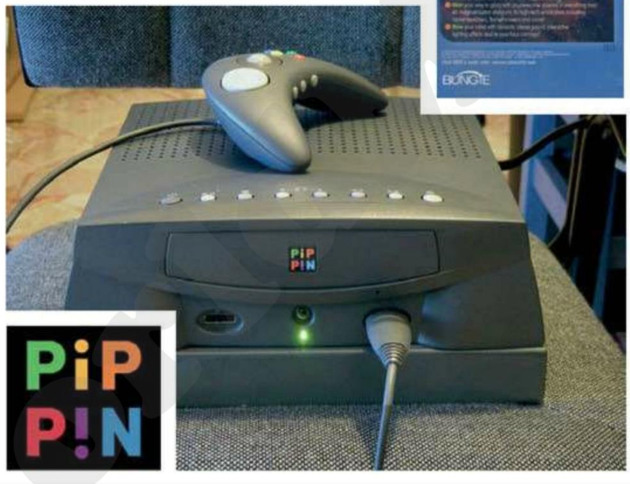
The Pippin

IN 1995, APPLE teamed up with Bandai to create the cumbersomely named Apple Bandai Pippin. It was basically a very stripped down Power Mac, featuring a 66MHz processor and a 14.4Kb/s modem, and it ran a custom version of Mac OS 7.5.2.

The aim was to create a cheap computer that primarily played CD multimedia titles, mostly games, but could also function as a network computer. Despite these intentions, it effectively ended up being a videogame console for the most part.

It was a total failure, with Bandai ceasing production before even 100,000 units were made, making accessories outnumber the consoles. Reasons for this were that it was much more expensive than the already dominant 32-bit consoles at $599 US and had very little software, most created by Bandai itself apart from a few exceptions, such as *Super Marathon*, a port of the first two games in the FPS trilogy.





THE UNCONVERTED

Arcade games that never made it home



IN DEPTH

» *R-Type Leo* messes with convention by ditching the metallic greys of the earlier games. Sunglasses are definitely recommended.

» Irem introduced a new weapon in *Leo* called Force Bits. Surrounding each side of your ship, they fire in two directions and home in on enemies.

» Although they don't quite capture the imagination like the mayors from the original game, the many bosses in *R-Type Leo* are quite inventive.



R-TYPE LEO

■ **Developer:** Irem ■ **Year:** 1992 ■ **Genre:** Shoot-'em-up

■ **Alongside *R-Type Tactics*, *R-Type Leo* is one of the boldest games in the franchise. After finding huge success with *R-Type* and *R-Type II*, Irem felt a need to experiment with the mechanics that have served the series so well over the past 23 years.**

While home games such as *Super R-Type* and *R-Type III: The Third Lightning* stuck with the original tried-and-tested formula – charge shot, the Force, oppressive-looking visuals – *R-Type Leo* took the series in a bold new direction.

The biggest difference to the core *R-Type* gameplay is the addition of a second player, which greatly changed how the game played. Unlike previous *R-Type* games, if you died you weren't transported to the beginning of a stage, but were instead allowed to instantly carry on fighting until you both ran out of lives. Playing on your own featured the same gameplay mechanics of old though, so a second player was definitely advised as it just made the game so much easier to play.

Not content with introducing a second player, Irem continued to meddle with its classic gameplay by getting rid of your nifty charge beam and dropping the Force, which is quite possibly one of the greatest power-up devices of all time. Irem instead introduced Force Bits, which could be fired forwards or backwards and detached to home in on and destroy nearby enemies. This attack requires the Bits to be recharged before they can be sent out again, meaning that a fair amount of strategy is needed to get the best out of your weapons.

If the new weapon mechanics and second player weren't enough to convince you that Irem felt the series needed refreshing, then the vivid pastel-coloured stages were definite proof. The day-glo colour design was a world away from the Giger-inspired biomechanical visuals of the first two *R-Types* and can be initially quite hard to stomach. Once you put away your prejudices of what an *R-Type* game should actually look and feel like, however, you soon begin to realise that *Leo* is a perfectly acceptable addition to the series and easily more enjoyable than Irem's rock-hard sequel, *R-Type II*.

While no concrete sales figures exist for *R-Type Leo*, Irem h§as stated in the past that it wasn't as successful as the first two *R-Type* games, which probably explains why it never received a home conversion. This in itself is a real pity, as *R-Type Leo* proves itself to be an important addition to the *R-Type* franchise and shows that going against the grain isn't always a bad thing.



CONVERTED ALTERNATIVE

R-TYPE 1987

If you're going to play an *R-Type* on a home system then make sure it's the original. Getting everything right thanks to its iconic enemies, masterful power-up system and fantastic level design, it remains one of the greatest shmups of all time. It received a number of polished home conversions, from Master System to PC Engine.

KONAMI '88

■ **Developer:** Konami ■ **Year:** 1988 ■ **Genre:** Sports

■ **It's a shame that this wonderful little title from Konami never received a home release, as it's arguably the best game in the *Track & Field* series. Utilising the same hardware that Konami employed for *Chequered Flag*, it features wonderful cartoon-like visuals, extremely slick animation, and plenty of neat little scaling effects.**

Playing like a steroids-enhanced version of *Track & Field*, what impresses most about *Konami '88* – or *Hyper Sports Special* – is the sheer amount of variety that has been crammed into it. There are a total of nine events to compete in that range from the 100m Dash to Javelin and Skeet Shooting, and they all utilise the tried-and-tested three-button system that served the earlier games so well.

Considering that the Olympics took place that very year in Seoul, it seems strange that no home conversions were ever released, particular when you consider how good most of the home ports of *Hyper Sports* games actually were. While we'll never know Konami's reasons for this missed opportunity, the likes of MAME at least mean that gamers can still experience this slick sports title for themselves.



» [Arcade] There are some clever scaling effects in *Konami '88*, with the Long Jump being the most impressive.

CONVERTED ALTERNATIVE

HYPER SPORTS 1984

Konami's previous sports game was ported to everything from the NES to the CPC, and they were all surprisingly good ports. Special mention should go to Jonathan Smith's superb Spectrum offering, as it effortlessly captures the excitement of Konami's hit coin-op.



CONVERTED ALTERNATIVE

PENGO 1982

Released a year before *Dingo* hit arcades, *Pengo* remains a great maze game thanks to its clever layout designs, cute music and well-crafted gameplay mechanics. Unlike *Dingo*, it also received numerous ports to everything from the Atari 2600 to Sega's Mega Drive.



DINGO

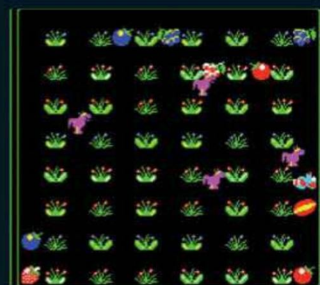
■ **Developer:** Ashby Computers & Graphics ■ **Year:** 1983 ■ **Genre:** Maze

■ **Although the Stamper brothers were best known for their wizardry on the Spectrum, they did occasionally dabble in the arcades. While the likes of *Battletoads* and *Killer Instinct* are well-known, this obscure offering from 1983 is equally worthy of your attention.**

Published by Jaleco and receiving a relatively limited release, *Dingo* is typical of Ultimate's output in its Spectrum period. It features bright, well-detailed sprites, wonderfully tight controls, and the whole package is polished to perfection.

Gameplay-wise it's fairly simplistic, requiring you to navigate your way around a rather straightforward maze – which, like *Pac-Man*, never changes – and pick up all the fruit while avoiding numerous enemies. Picked fruit can be thrown at your foes to stun them for a relatively short time, but it's also possible for your antagonists to lob fruit back at you, meaning that you'll need a sharp eye and good reflexes to successfully complete it.

There's nothing in *Dingo* that you haven't already seen before, but it's so polished that it feels like you're playing a far better game. Rare has gone on to bigger and better things, but *Dingo* is a testament to just how much raw talent it had.



» [Arcade] *Dingo* looks like any old maze game, but don't let appearances fool you, it's surprisingly good fun.

BEST LEFT IN THE ARCADE

HAUNTED CASTLE

■ **Developer:** Konami ■ **Year:** 1988 ■ **Genre:** Adventure

■ **When a franchise runs for nearly 25 years it's inevitable that it will produce the odd dud along the way. So it was, then, that two years after *Castlevania*, Konami decided to release the horrifyingly bad *Haunted Castle* on arcade goers.**

Everything about this 1988 release is a spectacular misfire that, had it been on a home console, could have potentially killed the series stone dead.

Filled with rudimentary animation and horrible visuals, later stages become so messy that it can be a nightmare to work out where you're even supposed to be going. Gameplay is even worse, as *Haunted Castle* is clearly designed to eke as much money out of the player as possible. Enemy attack waves are annoyingly erratic, your character takes an age to respond to the spongy controls, while the ridiculous difficulty makes it impossible to enjoy. Add in some pathetic bosses and this is a title that makes even the N64 games feel like absolute masterpieces.





The great love of Pac-Man's life once had legs, wasn't a 'Ms.' and was branded 'crazy'. Craig Grannell unlocks the full story behind the classic maze game, with the help of GCC alumni Doug Macrae, Steve Golson and Mike Horowitz



IN THE KNOW

- » **PUBLISHER:** MIDWAY/NAMCO
- » **DEVELOPER:** GENERAL COMPUTER CORPORATION
- » **PLATFORM:** ARCADE
- » **RELEASED:** 1981
- » **GENRE:** MAZE



Classic arcade games were designed to be brutal, aiming to hook a player, end games quickly and encourage further coins to be deposited. But however tough developers made their creations, gamers mastered them, leading to hours-long sessions on single coins, angering revenue-hungry operators.

For popular titles, after-market add-ons were sometimes used to ramp up difficulty and further challenge the best players. Most faded into obscurity, but one outshone and outsold its parent, surviving legal challenges, a publisher spat and an abrupt sex change for its main character. The title in question: *Ms. Pac-Man*.

The game's origins began at MIT. Doug Macrae was operating a pinball machine in his dorm, until he took on Kevin Curran as a partner and began purchasing additional machines. "We quickly expanded into operating 20 arcade machines across four dorms," recalls Macrae. Three machines were *Missile Command*, which initially performed well. However, the coin count dropped as people mastered or tired of the game. "We came up with the idea of creating enhancement kits to address these issues, adding new features, algorithms and difficulty levels."

By this point, Macrae and Curran had moved out of the dorm and were renting a house in Brookline, Massachusetts, along with like-minded programmers and videogame enthusiasts Steve Golson, Mike Horowitz, John Tylko, Chris Rode and Larry Dennison.

"By April, General Computer Corporation (GCC) was incorporated, with Doug and Kevin as owners," recalls Golson. "The kit was named *Super Missile Attack*, and most of us dropped out of MIT, because working on games was more interesting than going to class." Adverts were taken out in trade magazines, and the kit was a big success.

With gamers and arcade owners happy with *Super Missile Attack*, and interest coming from manufacturers, brokers and importers within the videogames industry, the team started thinking about other games to enhance. "We started working on kits for *Asteroids* and *Pac-Man*," says Golson. "Work on the *Asteroids* kit didn't get far. For an enhancement kit to be successful, you need a large installed base, so only the most popular arcade games are good targets. *Asteroids* was the biggest build of any game in the USA – 77,000 cabinets – but by mid-1981 it looked like *Pac-Man* was going to beat that by a wide margin."

Much of the team didn't consider *Pac-Man* to be a great game, and aside from its popularity, the main reason for creating a kit was because of the game's deficiencies. "I wasn't a fan, but everyone else on the planet was, so we knew an after-market add-on would be popular," explains Mike Horowitz. "And since the game was so deterministic – every game played exactly the same way – it was easy to make much, much better."

> **"We had no idea what a big deal it would be. But by 1982, we had the hottest arcade game in the USA!"**
>
> From courts to charts in a year

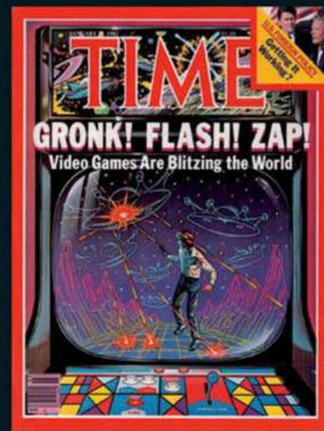
The initial idea was to get the kit, dubbed *Crazy Otto*, to market in late 1981, when *Pac-Man* games in arcades would stop making money. Although the game's visuals were more advanced than *Pac-Man*'s – bipedal characters boasted more animation frames and the maze was solid and colourful – the biggest changes were gameplay-oriented, adding randomness and more mazes. "Once players had learned *Pac-Man*'s maze, they could play forever, and many became bored," says Macrae. Horowitz adds: "Adding more mazes made the game harder and acted as an incentive, because players had a reason to get to higher levels."

"There was an idea that players would get used to a maze and then, after the first two, there would be something new. Then, after another three racks, another new maze! How many were there? Players would be eager to figure that out," reasons Golson. "And each maze had its own quirks to learn, along with increasing the difficulty in later levels due to there being fewer escape tunnels and more corners to get trapped in."

According to Macrae, mazes were initially sketched on graph paper, and the designers would look at various layouts to see which would be the most exciting to play. They would then get coded and tested. "Some worked very well and some did not," he says candidly, although Golson remembers this aspect of the game "came very quickly", with few variations and little tweaking.

Another major change focused on how the monsters moved.

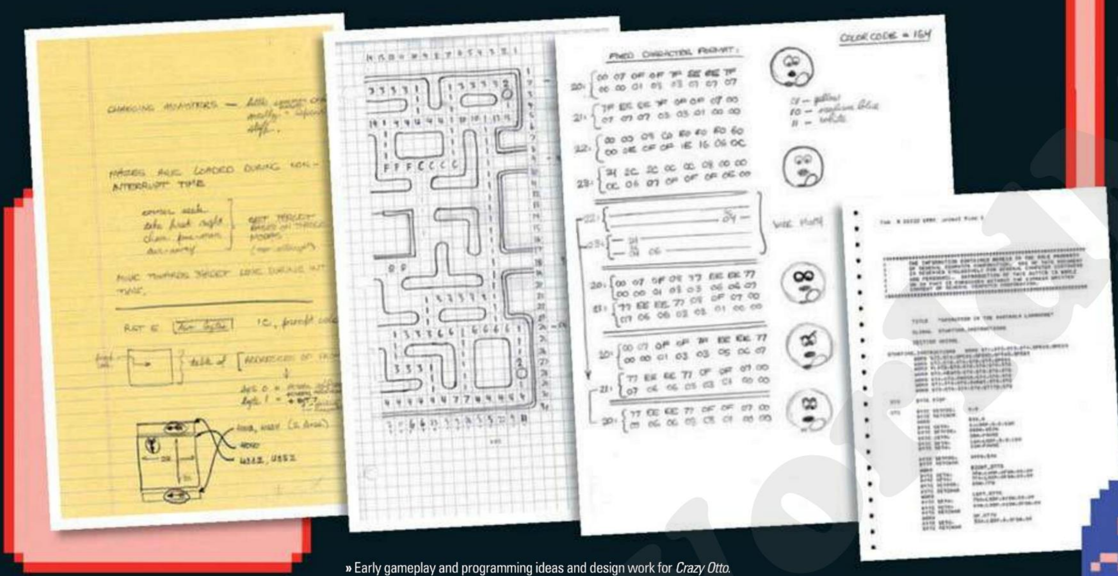
» Speculation surrounding the development of *Crazy Otto* stems from a single photo in *Time*'s January 1982 issue.



CRAZY OTTO'S ACCIDENTAL DEBUT

MUCH SPECULATION SURROUNDING *Crazy Otto* can be traced to 'Games that play people', an article from the January 1982 issue of *Time* magazine. "So it's January 1982 and we're finally done with *Ms. Pac-Man*. We're in the new GCC offices and Mike Horowitz shows us an issue of *Time*, with an article on videogames," recalls Golson. Horowitz asks if there's any way of telling if a photo of *Missile Command* in fact shows GCC's *Super Missile Attack* kit, but Chris Rode says that's not possible from an in-game shot. "'Oh well,' we thought. 'We're not famous'," laughs Golson. "And then we glanced to the bottom of the page, to a screen grab captioned: 'Pac Man scuttles about a maze, eating dots'. Only it's not *Pac-Man* in the grab – it's *Crazy Otto*!"

Golson posits that some time in December 1981, *Time*'s photographer went to a Chicago arcade, saw a line of yellow cabinets, all labelled *Pac-Man*, and picked one at the end of a row, or the one that had a bright pink maze, rather than a dark blue one that's hard to photograph, and took a photo. "At the time, there were 96,000 *Pac-Man* cabinets in the USA, and only three had been converted to *Crazy Otto*, out on test play. What are the odds the photographer would pick one? Amazing," he says. "And so *Crazy Otto*'s been famous all these years, with that photo leading to much speculation about the mythical '*Pac-Man* with legs'. Now, finally, the history of *Crazy Otto* is coming out."

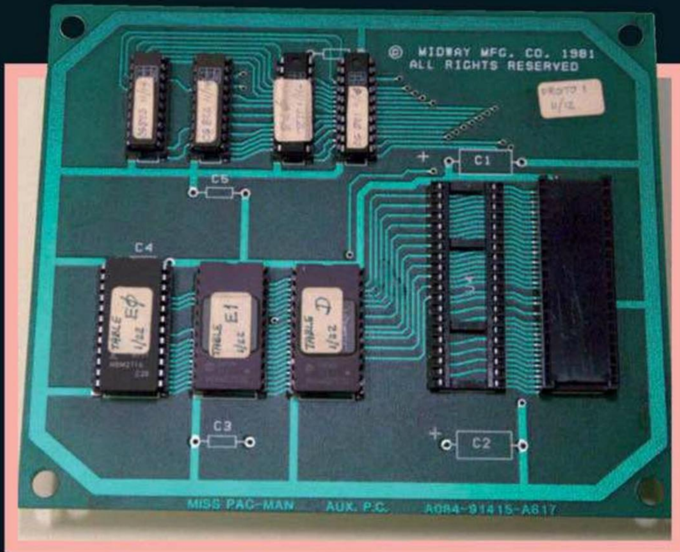


» Early gameplay and programming ideas and design work for *Crazy Otto*.

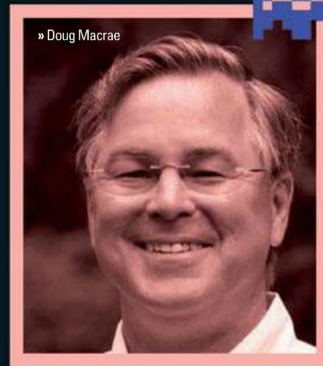
PRETZEL LOGIC

UNLIKE IN *PAC-MAN*, whose bonuses ranged from fruit to a *Galaxian* boss, *Ms. Pac-Man*'s roaming bonuses were all fruits, with the exception of a pretzel. "During the development of *Crazy Otto* we were concerned about trademark infringement, and so we changed all the characters, but there were also four bonus items," remembers Golson. "There was a spaceship – many didn't recognise it as a character from *Galaxian*, but that would have caused clear trademark problems. We were also concerned about the key and the bell, and the bunch of grapes was an issue simply because players didn't recognise it – people often thought it was a hand grenade!"

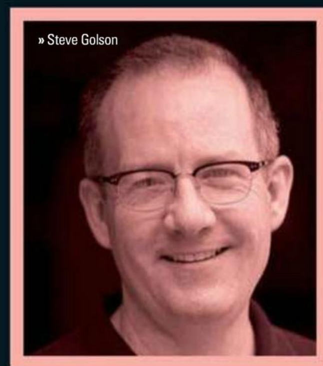
In the end, the team required seven objects, because that was how many could be displayed at the foot of the screen, and so three new fruits were needed. "We had limited colours and only 14x14 pixels, and so we wondered what fruits would be obvious to the player," says Golson. "We added a pear and banana, but needed one more. Kevin Curran really loved pretzels, so the pretzel was put in for him, and it was easy – just two colours!"



» The first board that Golson received from Midway, on 12 November 1981. Note the early '*Miss Pac-Man*' name.

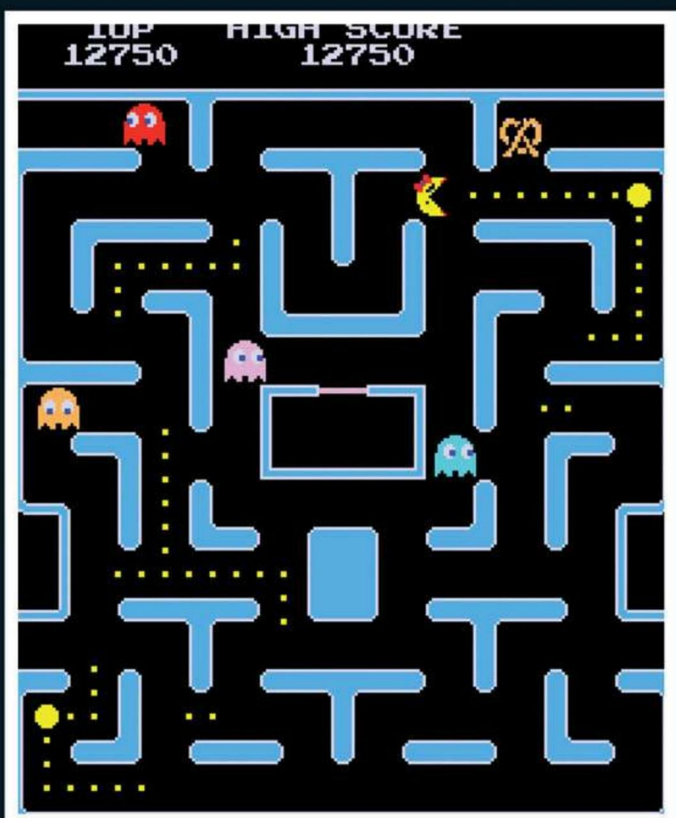


» Doug Macrae



» Steve Golson

> **"Many players took a while to realise that the monsters were no longer predictable"**
>
> Ms. Pac-Man had a few surprises in store for Pac-Man masters



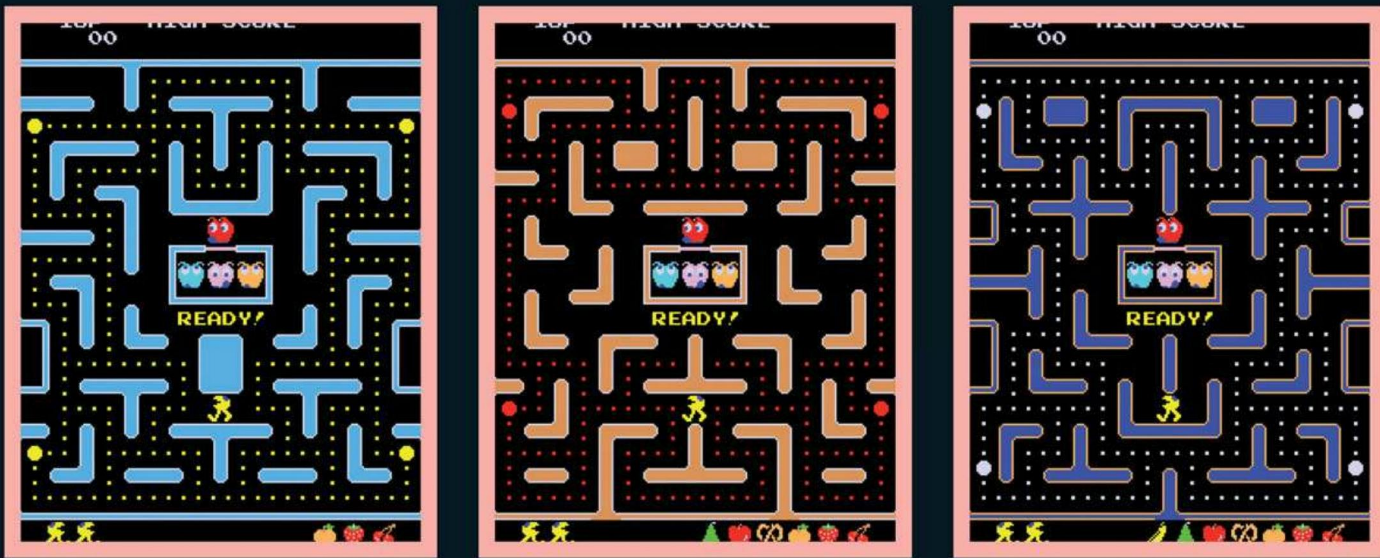
» [Arcade] A decidedly non-fruity pretzel roams the maze, due to Kevin Curran's love of the snack food.

"Adding randomness to that aspect of the game was the most important change," claims Horowitz. "The original algorithm for ghost movement meant that on early racks, Pac-Man could 'hide' in certain spots and the ghosts would never find him." This predictability was so obvious that a book of patterns was published – *How To Win At Pac-Man* – and so the team realised that this was the major deficiency to attack.

The flaw was fixed, according to Macrae, by generating a random number that could be used to determine the monsters' behaviours, thereby stopping most pattern play, and by addressing 'intelligence' algorithms, making each monster a slightly smarter adversary. Golson outlined for us some specifics of how this worked. The game uses true randomness: there's a free-running 7-bit counter in the Z80 microprocessor (the R register). It's intended for automatic refresh of DRAM, but Golson says it "makes a great random number generator – it's very unpredictable". At any given time, monsters are in one of several 'modes' – chase, run away, take next left turn, go to the monster's 'home' corner. The team amended the last of those, instead sending monsters to a random corner. "It's just enough to mess up pattern play, although in higher racks, monsters spend most time in chase mode, so randomness affects gameplay less and patterns become more useful," explains Golson. There was also a late change to the red monster: "We found a spot in the first maze where Otto could hide and never get eaten, and so Mike changed the red monster to eventually lock into chase mode."

Horowitz elaborates: "We thought we'd eradicated hiding spots, but late in development I found one, which caused a bit of a panic. It was too late to modify the first maze, so I made it that when the red monster went into chase mode, he stayed that way, meaning there were then no hiding places." This resulted in a tougher game during its early levels, further magnified by the fact that, according to Golson, many players took a while to realise that the monster algorithms were no longer predictable.

More changes added extra polish and interest. First, bonuses now roamed the mazes. "The *Pac-Man* hardware supports six moving objects. There's Pac-Man, four monsters and the bonus, but in *Pac-Man* the bonus never moves," says Golson. "We decided to change this.



» [Arcade] The mazes in *Crazy Otto* are identical to those in *Ms. Pac-Man*. Only character graphics and bonus items were redesigned.



DEVELOPER HIGHLIGHTS

SUPER MISSILE ATTACK (PICTURED)
SYSTEM: ARCADE
YEAR: 1981

MS. PAC-MAN
SYSTEM: ATARI 2600
YEAR: 1982

QUANTUM
SYSTEM: ARCADE
YEAR: 1982



» [Arcade] The first cartoon intermission finds Crazy Otto and a female counterpart fleeing monsters. When the two bipedal Pac-people meet, it's love at first sight.

At first, the fruit was going to bounce through the maze and suddenly blow up, using an 'explosion' character we found in the original graphics ROM. That didn't look good, though, so once we had the fruit coded to move into the maze, we ran it backwards if Otto didn't grab it first." Again, randomness was used to make the game less predictable – there are several predetermined paths, but they're chosen at random, so you never know exactly where the bonus will go. "Also, once you get past level 7, the fruit is randomly chosen," notes Golson. "This annoyed really serious players, because in a high level, you might get a cheap 100-point bonus instead of the maximum 5,000, making it hard to get the 'highest possible' score."

Elsewhere, Horowitz worked on new intermissions: "Since these were just for fun and didn't impact gameplay, it was an obvious choice to write new ones," he recalls. "My inspiration was to adapt the age-old 'girl meets boy', 'girl chases boy', 'girl gets the boy' story."

Aside from the first maze's hiding-place blip, the impression given is of an almost effortless *Crazy Otto* development, and so how easy was the game to create from a technical standpoint? "That depends on your definition of easy," says Horowitz, who explains that all the team had to work with were *Pac-Man*'s ROMs. "We had to reverse-engineer the entire game, which was a tedious process, although luckily we had a microprocessor emulator. This meant we could view the raw assembly language output from the program ROMs and map the program ROMs to writable memory, enabling us to make changes and immediately see the results." He adds that GCC also couldn't infringe on the copyright of the original code: "We could only add patches – jumps to the program memory on our daughter card."

Creating new graphics and sound was also a challenge. "It was easy to find the table of byte sequences used to generate sounds, but problematic to determine what those bytes controlled," recalls Horowitz. "Many new sounds we created came from trial and error – I'd plug in different values to different positions of the table and listen for changes." As for graphics, Horowitz says the team had no tools for creating graphics or animation: "Someone had the great idea to use a Lite-Brite," he grumbles. This Hasbro toy enables you to create 'glowing' pictures by pushing coloured pegs through black paper into a grille. On turning on the toy's light, you see your image. "Each row is offset horizontally from its neighbour, and so can't be used to simulate a 16x16 grid."

"Oh, the Lite-Brite," laughs Golson. "You'd cover the front with construction paper, to stop light leaking, but when you moved a peg you'd have a hole leaking white light!" His solution was to cover purple pegs in black marker and use them as blockers, and to use every other line in the hexagonal field to emulate the 16x16 grid that *Crazy Otto* characters required. "Finally, I put a sheet of white paper over the front as a diffuser – standing across the room, squinting a bit, I could test my character design!"



Horowitz's solution was simpler: graph paper. And he recalls that the Lite-Brite wasn't the only problem the team had with *Crazy Otto*'s graphics: "The character ROMs required an arcane algorithm. As I recall, each 16x16 was cut up into eight 4x8 sections and then each vertical pair made up one nybble in the ROM. So after each design, we still had to hand-code each image into the correct sequence of bytes."

MS. PAC-MAN

Crazy Otto's development wasn't entirely straightforward, then; luckily, though, the effort didn't go to waste. Towards the end of testing, machines were put into local arcades. "We were extremely pleased with the results – *Crazy Otto* significantly outperformed *Pac-Man* and players loved the changes we'd made," remembers Macrae. It was during this period that the infamous *Time* shot was snapped (see '*Crazy Otto*'s accidental debut'). Encouraged by early testing, the team travelled to Chicago to meet with Midway for discussions about having it build the game. However, this wasn't entirely through choice, and was, in fact, the result of a convoluted legal battle that had eventually turned into an uneasy alliance. "*Super Missile Attack* caught the attention of Atari, who sued GCC for copyright infringement. We thought we were in the right, because we hadn't 'copied' anything – we'd only added new code," explains Horowitz.

GCC decided to fight, despite lacking the myriad lawyers that Atari had at its disposal. "They asked for $15 million in damages – if dropping out of school to write games was fun, so was being sued in federal district court by the world's premier games company," jokes Golson. Work continued on *Crazy Otto* throughout the hearings, depositions and negotiations, and, according to Golson, Atari eventually realised that GCC wasn't going to give up, had a strong legal position, was causing a PR nightmare for Atari, and was going to continue designing games anyway, and so GCC may as well design them for Atari. "They dropped the lawsuit and contracted us to write games for them, by which point the *Pac-Man* kit was ready to go," says Golson.

As part of its contract with Atari, GCC had permission to develop and sell kits, but only with approval from the original manufacturers. Presumably, Atari thought that no one would give GCC permission to release its kits, but *Crazy Otto* was waiting impatiently for release. Cue: Kevin Curran cold-calling Dave Marofske, president of Midway. "He said something like, 'You may have seen Atari abandoned the lawsuit. Our kits are legal. We've got a kit for *Pac-Man* that we're bringing to market. Let's sit down and talk out our differences," laughs Golson. "Now, Dave's having a terrible time with counterfeit *Pac-Man* games and merchandise. He's in court all the time. So having someone call him up… 'Why, that's nice of you! Sure, come on out to Chicago and bring your game. Let's talk!'"

Midway liked *Crazy Otto* and bought the rights. Deciding to release it as a new game, changes were demanded to make it a more obvious sequel to *Pac-Man*. The first thing to go was Otto, along with monsters Plato, Darwin, Freud and Newton. "Midway were paying, so we didn't mind. We liked Crazy Otto with his legs and the cool monsters with antennae and blue shoes, but using the original Pac-Man and ghosts made sense," says Golson. An early revision saw *Crazy Otto* rebranded *Super Pac-Man*, but Macrae recalls that Midway became enamoured with Horowitz's intermissions. "They saw the 'love affair' animations and suggested they

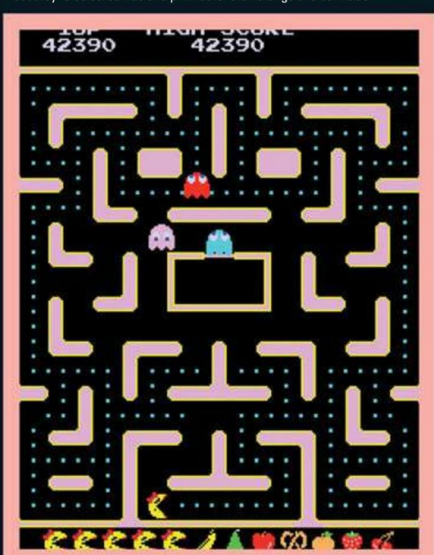
> **" Kevin Curran called the president of Midway and said, 'Atari abandoned the lawsuit. Our kits are legal. Let's talk' "**
>
> GCC proves that fortune favours the bold

PIXEL PORN

THE INTERMISSION ANIMATIONS that run throughout *Ms. Pac-Man* follow a basic love story: Ms. Pac-Man and Pac-Man meet, they fall in love in that common 8-bit whirlwind romance style – no cut-scene movies back then – and they then have a baby. Observant readers might notice there's a step missing. "Unlike the first two animations, the third, 'Junior', required new graphics – a flying stork, the bundle, and Jr. Pac-Man," recalls Horowitz. "As a placeholder, I made a 'they f**k' animation. Pac-Man and Ms. Pac-Man were at the lower-left of the screen, facing each other, with mouths opening and closing. We all thought it was pretty funny, and it stayed in the game until we put in the actual – and still a bit unfinished – 'Junior' animation."

A little later, Kevin Curran and Doug Macrae were on a flight to Chicago to meet with Midway, and Horowitz casually let slip about the ROMs they were carrying: "Uh oh, I'm not sure if those ROMs have the right third animation." Curran freaked out so badly that Horowitz had to immediately reassure him that he was just kidding, and that the ROMs did indeed have the clean 'Junior' animation.

» [Arcade] After round 13, the mazes alternate between the third and fourth ones, but they're coloured lilac and pink rather than orange and dark blue.

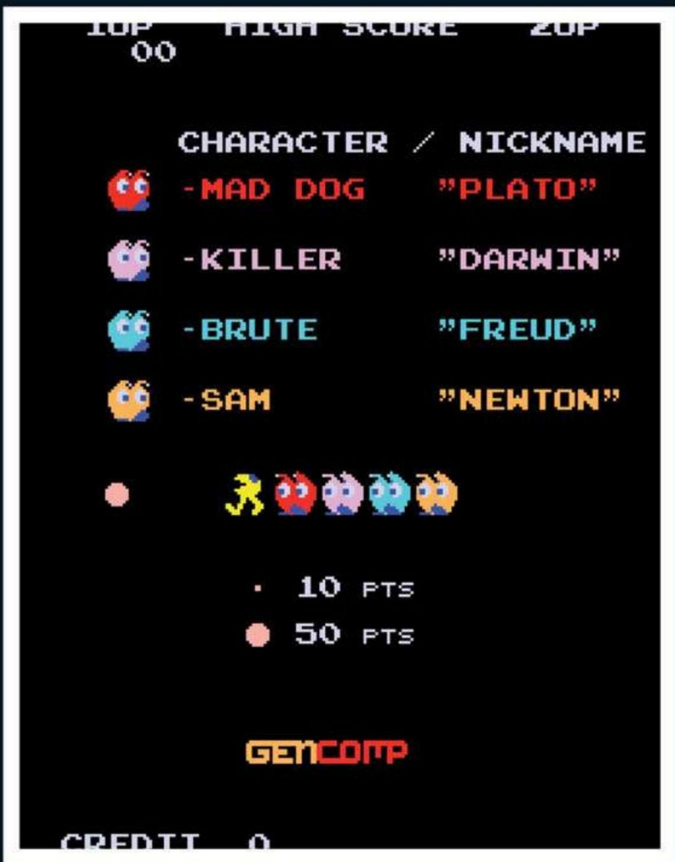


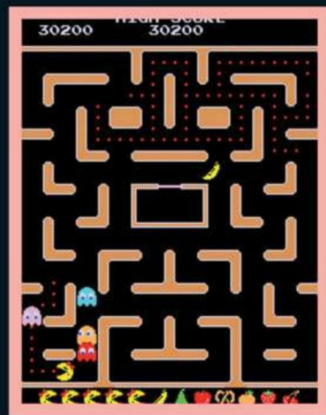
» [Arcade] Scared ghosts flee from a powered-up Ms. Pac-Man.



» [Arcade] The improved algorithms for the ghosts' behaviour in *Ms. Pac-Man* made defeat a much more likely outcome for even the best players.







» [Arcade] A pretty good example of how not to play *Ms. Pac-Man*, unless you enjoy watching her get clobbered.



» [Arcade] Ghosts in hot pursuit of Ms. Pac-Man, although they're in for a shock when she munches the power pellet.

» As with *Pac-Man*, *Crazy Otto* had character names. Also, note the 'GenComp' logo. This remains in the final *Ms. Pac-Man* graphics ROM, but is never displayed.

should star Pac-Man and a female Pac-Man, with the end of the third intermission resulting in 'Junior'." And so *Super Pac-Man* became '*Pac-Woman*', and then '*Miss Pac-Man*', until, according to Golson, "someone realised that, hey, she has a baby, so we can't call her 'Miss'."

Ms. Pac-Man stuck as the final name and grew into a brand almost as big as *Pac-Man* itself. "At the time we thought it a better marketing ploy to go for a female Pac-Man rather than a brand new character," says Horowitz. "And it's impossible to know, but I think using 'Ms.' instead of 'Miss' was a positive factor in the game's success." Horowitz recalls that Midway was also hands-off regarding the character design, and so many iterations were tried before the team settled on the final look: "For a while, she even had flowing red hair!"

Ironically, the 'family' animations that Midway liked so much led to short-lived legal wrangling that became the project's sole sour note – although Macrae clarifies that this has been blown out of proportion in various accounts. "The legal dispute was primarily over future licensing rights regarding the family created in the intermissions. And it wasn't with Namco, but with Bally/Midway," he explains. "It was eventually settled via new agreements that defined how we'd get paid on future games and properties. As part of this agreement, Midway licensed the next of our sequels, *Jr. Pac-Man*, which did reasonably well. And our rights in *Ms. Pac-Man* were never 'turned over' to Namco – to this day, we get paid royalties for *Ms. Pac-Man*."

The fact that royalties are still rolling in for *Ms. Pac-Man* shows what an enduring game it has been. From 8-bit micros to modern TV games and iOS devices, *Ms. Pac-Man* remains hugely popular. "In hindsight, I don't find it surprising that *Ms. Pac-Man* became the bestselling of all of the '*Pac*' family of games, and one of the bestselling games of all time," says Macrae. "The game was a careful blend of *Pac-Man* with advances that made it more exciting and challenging. *Pac-Man* is a great game; *Ms. Pac-Man* is even better."

Horowitz and Golson are a little more surprised regarding how things turned out for their game. "When we put *Crazy Otto* into local arcades, there was a crowd around it the entire time, and we knew it had an initial 'wow' factor, but I don't think I had any notion of it being a hit until I saw an actual *Ms. Pac-Man* cabinet on location at a different arcade," says Horowitz. "As an add-on, I don't think it would have made such a splash, but in its own cabinet, and with an immediate appeal to the then-untapped female market, it felt like it could be very successful." Even so, he wasn't prepared for how huge the game would become. "And I don't think anyone back then could have predicted that *Ms. Pac-Man* would still be relevant in 2010," he adds, finding the new wave of interest in the old title a great surprise. "We were just engineers doing what engineers do: fixing obvious flaws in an existing design, making a popular game even better."

His thoughts are echoed by Golson: "We knew we had a fun game, but even in 1981 we had no idea what a big deal it would be. But by mid-1982, we were flying high with our 'secret' Atari contract and the hottest arcade game in the USA – boy, was that a good feeling! And to see all the licensed merchandise was a hoot! But we had no idea it would be such a big hit."

Macrae, Golson and Horowitz all remain thrilled about the longevity of their creation. "I think for a serious games player, the randomness in *Ms. Pac-Man* still makes the game interesting, right from the first rack," says Golson. "It has the right balance of difficulty and fun gameplay, starting out easy for the beginner and getting harder at just the right rate." We leave the final word to Horowitz – what are his thoughts about having worked on *Ms. Pac-Man*, as it approaches its 30th anniversary? "I was, am, and always will be proud of *Ms. Pac-Man*. We changed enough – but not too much – of *Pac-Man* to make it a wonderfully fun game to play."

Special thanks to Steve Golson for tireless enthusiasm, photography and scanning.

» YOUR ESSENTIAL GUIDE TO FORGOTTEN GAME SYSTEMS

OBSCURA MACHINA

#1 C64GS – The Games System



» [C64GS] *Wrath Of The Demon* takes its inspiration from *Shadow Of The Beast*. This level features 12 levels of parallax scrolling.







JUST THE FACTS

Sales estimates suggest Commodore sold around 20,000 out of a production run of 80,000 systems. Leftover components went into making C64Cs.

The Secret Weapons of Commodore website maintained by Cameron Kaiser has unconfirmed reports of the C64CGS – a GS system with a proper keyboard – being sold in Ireland.

Switching on the GS without a cartridge present gave a small animation telling the player to switch off and insert a cartridge.

The GS had additional software in ROM for creating drop-down windows, but software using it would have been incompatible with the standard computer.

The C64GS could boot software from the TIB Ultimate 3.5" disk drive, which plugged into the cartridge port.

There were just 27 official releases for the C64GS, including three titles from Norwegian studio Silverrock.

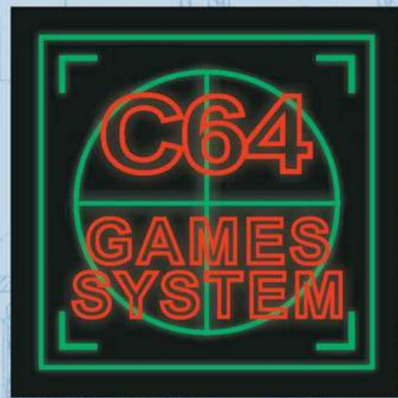
The launch price of the console was £99, but within 18 months shops were selling off stock for as little as £19.99. Boxed examples on eBay now sell for more than £100.

Commodore's international divisions often came up with their own projects. Commodore Japan had created the Max (or Ultimax) based on the same chips as the C64 and loading games from cartridge, but its limited memory and membrane keyboard made it a flop. In 1989, Commodore Germany released a C64 bundle containing the computer, a joystick and three games on a single cartridge. Commodore UK took the concept further with the C64GS, putting the standard motherboard into a new case without a keyboard and some of the external ports. Games were cartridge-only, with a top-mounted slot. The graphic (VIC) and sound (SID) chips remained the same, unlike Amstrad's enhanced Plus range and GX4000 console. Existing cartridges generally had a limit of 16K, so Commodore called in an expert.

Programmer John Twiddy was famous for *The Last Ninja*, as well as devising the Cyberload loading system and the Trilogic Expert cartridge. In January of 1990, Commodore approached his new company, Vivid Image. Twiddy's prototype cartridge had 512K of ROM and a battery backup, with potential for up to 2MB. It used bank-switching techniques, similar to those used by the NES, to give the greater capacity. The new system allowed a disk drive to simulate loading from cartridge.

For software houses, Commodore's plans to take on Nintendo had some key advantages. Commodore was not charging a licence fee or restricting the number of games a company could make in a year – Ocean's relationship with Nintendo meant that certain games, like *Bart Simpson vs The Space Mutants* and *WWF WrestleMania*, could not be put onto cartridge. Companies already knew how to program for the C64, and Commodore would handle the cartridge production. Cartridges were harder to pirate than tapes and disks, and would retail at a higher price, ranging from £14.99 up to £29.99, compared with £9.99 for a standard tape game. The promise at the ECTS trade show that summer was of 100 cartridge games in time for Christmas 1990.

In 1990, Commodore gave the C64 a makeover, turning it into the C64GS. Andrew Fisher looks back at the failure of the cartridge format



» The logo appeared on the top of the machine.

Bundled with the machine was a four-game cartridge and an Annihilator joystick in matching cream and red colours. The classic *International Soccer* was reprogrammed for joystick controls in the menu, while System 3's *Flimbo's Quest* was a cute platform game and Domark provided arcade puzzle game *Klax* with its falling tiles. Three quarters of the cartridge was *Fiendish Freddie's Big Top O' Fun*, mixing black humour with circus skills. With instant loading, this was much more fun to play on cartridge than from tape or disk.

The magazine market took notice too. *Zzap!* added the console to its coverage and would go back to being C64-only the following year, and the first issue of *Commodore Format* had a big spread on the new machine. The hype surrounded big-name titles – the Amiga showcase *Shadow Of The Beast* was a shining example of something that would have proved difficult to convert without the instant loading. A subsequent pirated disk version had long loading times.

Ocean was the main supporter of the GS – and Amstrad's GX4000 – creating its own development system. A modified version of Paul Hughes' Freeload system pulled in new data as it was needed. The distinctive black cardboard boxes reminded users that the cartridges were also compatible with the standard C64, although the advertisements sought to confuse with their talk of '8 meg' cartridges, meaning 8 megabits, or 256K. *Navy SEALs* used the space to great effect with extra bitmap presentation, while *Chase HQ II* used the Annihilator's extra fire button for its nitro boost. Strangest of all was *Double Dragon*, a new version of the coin-op first converted by Melbourne House. This 'loaded' extra types of enemy as a level was played, and is now one of the rarest C64 titles.

Domark put three of its arcade conversions on cartridge, with only *Cyberball* making use of the format to give a larger playbook. System 3 promised enhanced versions of old games and new titles. *Last Ninja Remix* was essentially *Last Ninja 2* with a new status panel, remixed music and an extra introductory sequence. *Myth: History In The Making* appeared on cartridge, but sequel *Dawn Of Steel* was never finished. The much-anticipated *Last Ninja 3* never saw a cartridge release, appearing on tape and disk only. Spanish company Dinamic released *Narco Police* and four other titles in limited quantities, making them rare for collectors. Less well-known were the Australian company Home Entertainment Suppliers' range of licensed cartridges including *Leaderboard*, and the four-game compilations published in 1995/96 by Polish company Atrax using games licensed from budget specialist Alternative.

» Simon Quernhorst's limited edition *R8ro* has eight small games on a single cartridge.



The NES, with its *Teenage Mutant Hero Turtles* pack, and the 16-bit Sega Mega Drive proved strong competition for both the GS and the Amstrad GX4000. Shops were soon selling the GS cheap, and development was halted. Gamers missed out on double-pack compilations of classic Thalamus titles, the stunning *Wrath Of The Demon* – only available on disk in the end – and the planned conversion of *Starglider II*. The cartridge releases and the machine itself eventually became very collectable and hackers added a keyboard and disk drives to make the GS more useful, while Atari homebrew enthusiast Simon Quernhorst created limited edition cartridges designed to be compatible with the GS. It was only a footnote in the history of the C64, but the GS had an important legacy.



» *Pang* was one of several cartridge games borne of Ocean's enthusiastic support for the system.

PERFECT THREE



BATTLE COMMAND

■ Realtime Software used the cartridge to store 3D data tables, making this filled-vector conversion of the Amiga tank sim an impressive-looking game, right down to the missile-eye view.



POWERPLAY

■ The Disk Company's cartridge compilation had three brilliant games: Core Design's tricky platformer *Rick Dangerous*, Geoff Crammond's *Stunt Car Racer*, and Sensible Software's *MicroProse Soccer* in its 11-a-side iteration.



TOKI

■ *Pang* and *Space Gun* were excellent arcade conversions put on cartridge by Ocean as it worked to bolster the system's line-up, but the spitting ape, huge end-of-level bosses and tough gameplay give *Toki* the edge.

With thanks to Mat Allen for photographs of the GS.



FROM THE ARCHIVES

RETRO GAMER DIGS UP THE FILES OF THE CLASSIC COMPANIES OF OLD

PARKER BROTHERS

Famous as the publisher of Monopoly and Risk, Parker Brothers ventured into the world of videogames in the late Seventies. Mike Bevan explores the history of the company that brought Frogger and Q*bert home

Few toy and game manufacturers can claim a track record as enduring as that of Parker Brothers. Founded by George S. Parker in 1883, the company had kept abreast of industry change for nearly a century. It had brought fads like Ping Pong and Tiddlywinks from Europe to America, to spectacular demand. It had licensed some of the most-played board games in the world, including Cluedo/Clue from British manufacturer Waddingtons, Risk from a French movie director and, of course, the ever-popular Monopoly.

By the late Seventies, new forms of entertainment began cutting into the leisure time once reserved for traditional board games. In 1976, at the New York Toy Fair, rival Mattel Electronics introduced *Auto Race*, the first ever digital handheld electronic game. Its designer, Mark Lesser, would create a whole line of handheld games for Mattel, including the successful *Football I*. Meanwhile, Atari was preparing to launch its VCS console, a move that would prove essential for Parker Brothers' upcoming venture into videogames. For now, the company looked towards competing with Mattel in the electronic games market.

Its first attempt, a *Battleships*-style effort called *Code Name: Sector*, was a failure – at $50 it was prohibitively expensive compared to the $20 price-tag of *Football I*. In 1978, Parker Brothers released a second handheld electronic game called *Merlin*. The distinctive red, phone-like handheld could play variations of Tic Tac Toe and Blackjack, as well as simple tunes inputted by the user. Although competing with Mattel's line, along with an electronic upstart from Milton Bradley named Simon, the game helped Parker Brothers achieve over $100 million in sales the following year.

In 1979, Kenner Toys, part of the conglomerate cereal-giant General Mills, which also owned Parker Brothers, gained the licence to produce action-figures based on the recent *Star Wars* film. The result was one of the biggest-selling toy lines in history. At Parker Brothers, product manager Rich Stearns saw the potential for licensing the rights to produce videogames for the Atari VCS. Around this time, Atari had approached Parker with the suggestion of developing VCS cartridges based on their famous board games. Parker Brothers' president, Randolph 'Ranny' Barton, found the idea intriguing, but was concerned that General Mills wouldn't like the idea of licensing to a perceived competitor. Given that Parker Brothers had recently moved from its original, cramped headquarters in Salem to a brand new complex in Beverly, Massachusetts, of which extensive floor-space lay dormant, Barton used the opportunity to solve two problems. He decided to merge the company's existing applied electronics group with a brand new in-house videogames division.

Frogger and The Empire Strikes Back

The man given the job of building the new games division was technical manager

INSTANT EXPERT

Parker Brothers was founded by George Parker, a resident of Salem, Massachusetts, in 1883. The 'Brothers' of the company name stems from 1888, when George persuaded siblings Charles and Edward to help run the business.

The company is most well-known for its board and card games, which include Pit, Ouija, Risk, Trivial Pursuit and Clue (based on Waddingtons' Cluedo). Its most famous brand, Monopoly, became an overnight success on its release in 1933.

Parker Brothers remained a family-run business until 1963, when it was purchased by food giant General Mills, manufacturer of Cheerios and Count Chokula.

The strategy of moving into electronic and videogames was initiated by Parker Brothers' president Ranny Barton, George Parker's grandson, in order to compete with rival toy manufacturer Mattel.

The considerable resources of parent company General Mills gave Parker Brothers a huge advantage in acquiring the home platform rights to properties like *Star Wars*, *James Bond*, *Q*bert*, *Popeye* and *Frogger*.

Following the release of *Frogger* and *The Empire Strikes Back*, Parker's first two games for the Atari 2600, the company's revenue almost doubled.



> **"I think I had seen Star Wars and Empire Strikes Back only ten times each by that point..."**
>
> REX BRADFORD FEELS SOME LOVE FOR THE FORCE

Jim McGinnis. One of the first employees he hired was, ironically, Mark Lesser, the designer responsible for starting the electronic handheld craze at Mattel. "I took the job at Parker Brothers in 1980 to continue the handheld work," recalls Mark, "although Parker was simultaneously planning to build a team to develop videogames for the 2600 [VCS]. Jim hired me, and then a large amount of hiring followed. At Parker Brothers I programmed a word game, a cross between a board game and a handheld, which involved a touch-sensitive letter grid and round plastic tiles. I didn't think much of the game, and neither did PB, and it was never released. I followed that with experiments on a handheld LCD-based 3D *Star Wars*-type flying game, but the display was too slow and the resolution was too low to get dramatic 3D effects. From that point, I switched over to 2600 programming, having experienced two unpublished games, an unpleasant experience I had never had before."



Another employee who arrived to do handhelds but who would later branch into programming 2600 titles was Rex Bradford. "An ad for programming electronic games at Parker Brothers appeared in the *Boston Globe*, and I dashed off a resume," he remembers. "I played Parker Brothers board games incessantly while growing up, and played around with trying to make a few board games myself. I was very excited and talked my way into the job. I had no commercial experience per se, but I had done a lot of programming at the job I had in the Psychology department at the University of Massachusetts, working with the new-fangled microcomputers."

From a slow start, the pace of life in the videogames division went into overdrive when Barton was instructed by General Mills to have a major videogame launch ready for the 1982 Toy Fair. Rich Stearns began spending chunks of his working day in arcades, researching the kind of titles that would have the most market appeal. Due to the short time-frame, it was decided that a strategy of licensing existing arcade properties was the way to go. The first arcade game to be licensed in this manner was Sega's *Frogger*, which was scooped up for the then-astronomical figure of half-a-million dollars in advances, plus royalties.

The second major release was to be an original game for the VCS based on the most recent *Star Wars* movie, *The Empire Strikes Back*. Jim McGinnis made preparations for the new games with Lesser and Bradford. "The three of us were involved in reverse-engineering the Atari," recalls Rex. "Mark was a hardware expert and my role was writing a disassembler to peruse the assembly code of other cartridges, and to write short programs to test our growing knowledge. When the nod came to do *Empire Strikes Back*, Mark was still on a handheld game and so I got to do ▶

BY THE NUMBERS

0 The number of Ewoks featuring in Parker's published *Star Wars* games.

3 The number of game screens in *Popeye*.

6 The number of letter 'e's in *Frogger II: Threeedeep*.

7 The number of different console/computer platforms on which *Frogger* was released by Parker Brothers.

21 videogame titles were advertised in Parker's 1983 catalogue, of which six were never released.

30 The period, in days, that all Parker games were 'frozen' for bug-checking prior to being shipped.

40 videogame programmers were employed in-house by Parker by mid-1983.

700,000 The quantity of *Merlin* games sold by Parker Brothers by the end of 1978.

150,000,000 The sales figure, in US dollars, that Parker Brothers optimistically predicted for its videogame portfolio by the fall of 1983.

TIMELINE

1977 PARKER BROTHERS ENTERS THE ELECTRONIC GAMES MARKET TO LITTLE FANFARE WITH *CODE NAME: SECTOR.*

1978 PARKER RELEASES *MERLIN*, THE FIRST OF ITS HANDHELD ELECTRONIC GAMES, TO COMPETE SUCCESSFULLY WITH MATTEL'S FOOTBALL AND MB'S SIMON.

1980 PRESIDENT RANNY BARTON GIVES THE GO-AHEAD TO MOVE INTO THE VCS/2600 VIDEOGAME MARKET. FORMER MATTEL WHIZ-KID MARK LESSER JOINS PARKER BROTHERS TO WORK ON ELECTRONIC HANDHELD PROJECTS.

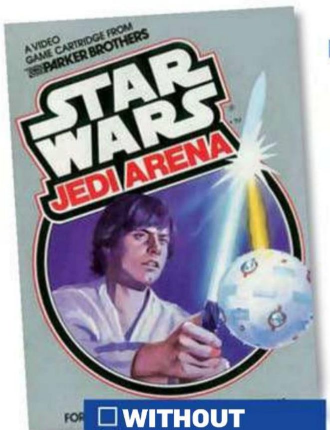
1982 PARKER BROTHERS RELEASES ITS FIRST TWO 2600 TITLES: *FROGGER* AND *THE EMPIRE STRIKES BACK*. THESE ARE FOLLOWED BY *AMIDAR* AND *SPIDER-MAN* IN TIME FOR THE CHRISTMAS SEASON.

1983 *STAR WARS: JEDI ARENA* IS RELEASED IN PREPARATION FOR THE ARRIVAL OF RETURN OF THE JEDI IN CINEMAS, AND THE UPCOMING *DEATH STAR BATTLE* AND *EWOK ADVENTURE*. REX BRADFORD AND THE 'GANG OF FIVE' LEAVE TO JOIN RIVAL PUBLISHER ACTIVISION. *FROGGER* IS RELEASED ON MULTIPLE FORMATS AS PARKER MOVES INTO PARALLEL DEVELOPMENT ON THE COLECOVISION AND INTELLIVISION CONSOLES.

1984 IN THE WAKE OF THE VIDEOGAME CRASH, PARKER EXPERIMENTS WITH ARCADE CONVERSIONS FOR NEW COMPUTER PLATFORMS SUCH AS THE ATARI 400/800 AND COMMODORE 64, WITH TITLES SUCH AS *GYRUSS*, *POPEYE*, Q*BERT AND *CIRCUS CHARLIE*. EVENTUALLY, THE COMPANY WINDS DOWN ALL IN-HOUSE VIDEOGAME DEVELOPMENT AND DISBANDS THE BEVERLY VIDEOGAMES GROUP.

"My biggest challenge in Spider-Man was getting the criminals to stay in place"

LAURA NIKOLICH ON THE WOES OF 2600 DEVELOPMENT



WITHOUT A PADDLE

Parker Brothers' increasing reliance on TV advertising resulted in a peculiar faux-pas regarding the marketing for Rex Bradford's second *Star Wars* game. "The *Jedi Arena* commercial was filmed with joystick rather than paddle controllers," remembers Dave Lamkins. "I have no idea why the marketing folks didn't film with both controllers and edit together the 'right' version. I'm certain they had been warned that the controller choice was subject to change. I think the commercial was eventually 'fixed' with the addition of a brief text overlay pointing out the game actually used paddles..."

it. Ed English was brought on very soon and did *Frogger*."

For Empire, the Parker Brothers designers were encouraged to base their game around the movie's opening battle on the ice planet Hoth. "I had free reign on the 'details' like the camera motion and the '3D effect', along with the algorithms by which the smart bombs flew," comments Rex. "Sam Kjellman was the official designer and responsible for most game ideas and the artwork, and he and I both were involved in the tuning of the game as it developed." The result, a fast-paced scrolling shooter in which players piloted a Snowspeeder against marauding Imperial Walkers, was the first *Star Wars* videogame on any home platform. For a considerable time, it would also be the best.

Chain reaction

Ranny Barton quickly realised that two games weren't going to be enough to fill the product launch at the upcoming Toy Fair. "We've got to get six out this year, or more," he told executives. "Money is no object… But you've got to turn the heat up and do more." Parker execs continued to scour the arcades for prospective hits. The company entered a bidding war with Coleco to secure the rights to Nintendo's cartoon platformer *Popeye*. Other acquisitions would include two Gottlieb arcade titles, *Q*bert* and *Reactor*, Universal's *Mr. Do's Castle*, and a number of early Konami games such as *Amidar*, *Super Cobra*, *Tutenkham* and *Gyruss*. Alternative console platforms, such as the Odyssey 2, Colecovision, and Mattel's Intellivision were examined and considered. *Frogger* was later released on all three.

The Beverly office hired dozens of new programmers to deal with the influx of 2600 arcade conversions. One such employee, Dave Lamkins, came as a godsend for the overstretched McGinnis. "Jim and I actually swapped positions," explains Dave. "As I recall, he wanted to get more hands-on with the technology. My nominal role was to act as a liaison between development and marketing. The engineers really didn't need a manager; they just needed someone to keep the marketing people from interrupting them too often… I also led the project to design and build the hardware and software for the development workstations we used to load and debug code on the 2600," he reveals. "These were fairly simple devices having an RS-232 port to our host computer, another port to a display terminal and an umbilical cord to a cartridge that plugged into the console."

Another new staff member, Charlie Heath, worked on the conversion of *Reactor*, an unusual Tim Skelly creation that played like a cross between pinball and a shoot-'em-up. "*Reactor* was a fun game for me," he says. "I had a physics degree and my favourite college professor had taught us a lot of ways to do approximations, which let me fake some semblance of vectors and forces. The technical staff were allowed to spend a lot of time in the arcade room, and I learned a few of the games inside and out, particularly *Reactor*. The abstract theme lent itself well to the limited graphics capabilities of the VCS; thank goodness I didn't need to do much more than put blobs up on the screen along with a blocky containment vessel."

"The arcade room was home to about five arcade machines, the ones I remember were *Reactor*, *Tutankham*, *Defender*, and *Q*bert* (the other game besides *Reactor* which I usually held the leaderboard top score for). *Frogger* was probably still there as well. The room was strategically located



» The new Parker Brothers office complex in Beverly, completed in 1977.

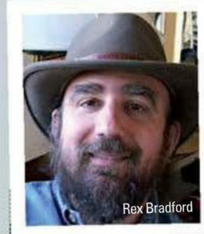
» A selection of early Parker Brothers 2600 releases, with their distinctive diagonal typesetting.





» [Atari 2600] Parker's *Star Wars* conversions were hampered by having to use raster graphics rather than the arcade's vectors.

WHERE ARE THEY NOW?





Rex Bradford
"I've been working mostly in the game business," says Rex, "at MBL Research, Harmonix, Mac Doc Software, and Rockstar Games. I also left the game industry for a few years to spearhead the Mary Ferrell Foundation website (**www.maryferrell.org**) which I'm currently president of, and am nowadays an independent software contractor, doing website development for Direct Relief International."

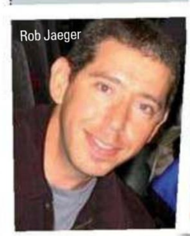
Mark Lesser
Now retired, but ever-fascinated with technology, Mark tells us that he is currently tempted to create apps for the iPad. "The iPad is everything that I could have dreamt of for a portable device years ago," he enthuses.

Charlie Heath
Charlie currently runs Blue Herring Consulting (**www.blueherring.net**), a software developer focused on creating entertainment software for wireless platforms.

Dave Lamkins
Dave is a senior software developer at web design company Chockstone, but still finds time to pursue his long-term passion for playing the guitar. "I write and record weekly with a couple of good friends," he says. "We play out a few times a year. I'm presently assembling a CD of trio improv material and trying to drum up interest for a show."

Rob Jaeger
Rob is currently President of Normal Distribution, LLC, a web marketing and development company. One of his recent inventions is the online poker odds calculator PokerCalc (**http://www.pokercalc.com/**)

Laura Nikolich
"Currently I am a photography student. I hope to do freelance work and have my own business," says Laura. "I just want something challenging, creative and fun. After 25 years of raising kids I don't think going back to the work grind is for me. Luckily I have the freedom to pursue my passions. I'd love to have another Parker Brothers party. Maybe next summer to mark the 5th anniversary of our first reunion…"



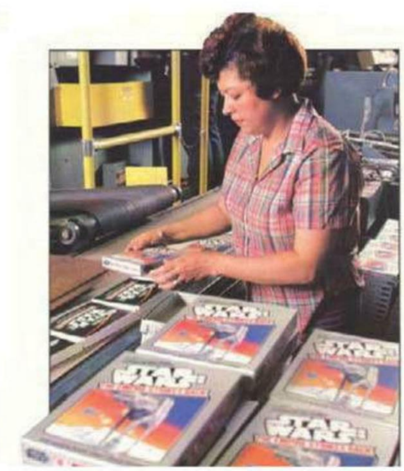


on the tech floor, which was the 3rd floor of the building – marketing and administration were on the 2nd. We walked by the arcade room on the way into the tech offices every time we came in or out of the office."

"The Parker Brothers building was beautiful," Charlie reminisces. "A glass building set in the woods with an open field on the back leading down a slope to a small lake. I guess the tech managers had window views, their offices were all along the outside of the space while the programmers were in cubicles in the middle. Time was compressed back then – the whole group had been together less than a year before I arrived and *Frogger* and *Star Wars* had just gone out the door. I was at Parker less than six months but it felt like a whole career."

A business Marvel

Alongside the steady stream of arcade conversions (and in-house-designed spin-off *Frogger II: Threeedeep*) Parker Brothers expanded its licensing base to include other movie and toy properties. The rights to produce a game based on scenarios from some of the most recent Bond movies resulted in the underwhelming *James Bond 007.* A game based on the GI Joe toy franchise, *Cobra Strike,* was also released. The company entertained the notion of attracting female consumers, striking a deal with American Greetings to publish cartridges based on Strawberry Shortcake and Care Bears, although only one, a puzzle game called *Strawberry Shortcake: Musical Match-Ups* was ever released.



» Copies of *The Empire Strikes Back* roll off the Parker production line.

After *Star Wars*, the biggest licensing coup for Parker came when Marvel Comics granted the rights for two of its hottest properties, *Spider-Man* and *The Incredible Hulk*. The first and only title to emerge from this deal was *Spider-Man* for the 2600, which reached store shelves at the end of 1982. The game was programmed by Laura Nikolich, one of several female designers working in the division at the time. "I have fond memories of my time at Parker Brothers," says Laura. "The best thing about working there was the atmosphere of joint creativity. We received a lot of freedom and respect from Parker Brothers' management. That contributed to an environment where we were all working together and contributing to the design of each other's games."

Laura was one of a handful of designers able to apply a level of creativity to her project, rather than simply porting an existing arcade game. "I did have to work to the licence," she explains, "but it was very broadly defined and I designed the game more to reflect the limitations of the 2600, which is why it's a vertical scrolling game. The game it closest resembles is an arcade game of the time called *Crazy Climber*, which the reviewers were very quick to point out. The reason was for ease of flow in the gameplay. Spider-Man had a web of adjustable length that was calculated in real time. To achieve this he had to stay in the same area of the screen and I could scroll up or down one line at a time giving the game fluid motion. If I had scrolled horizontally the scroll would have been in four pixel segments and would have resulted in jerky game movement."

"My biggest challenge in *Spider-Man* was getting the criminals to stay in place," she confesses. "Every once in a while the they would hover a line above the window frame. It drove me crazy! Dave Lamkins tried very hard to help solve this problem but in the end I think it was shipped with that one sporadic glitch. Parker Brothers was very supporting of our efforts. The company did all it could to help us creatively and to bond. They sent us to arcades several times before it became impractical as the group was getting larger. When the movie *Tron* came out we were sent to lunch and to see the movie for game ideas." Unfortunately, although *The Incredible Hulk* was advertised in a 1983 Parker Brothers catalogue (complete with screenshot) it was never released, and remains one of the most famous 'lost' Parker Brothers videogames.

Montezuma's Revenge

For many of the technical staff, the policy of licensing, rather than creating original games (or at least titles based on its famous board game catalogue) was a frustrating one. Before the Atari deal, Rex Bradford had been working on a version of electronic Monopoly, only to have his idea overruled. An Atari 800 version of Risk suffered a similar fate. "The reliance on licensing was explained to me this



FROM THE ARCHIVES

SIX OF THE BEST



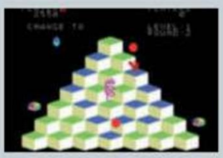
The Empire Strikes Back (1982)

By far the most impressive of Parker Brothers' *Star Wars* titles, this blistering shooter echoes *Defender*'s frenetic side-scrolling action, and still remains a blast to play.



Reactor (1983)

Taking place in an abstract octagonal arena, players race to contain a nuclear meltdown by ramming hostile particles into control rods and bonus chambers, pinball style. It's odd, hypnotic and strangely rewarding.



Q*bert (1983)

Colecovision *Q*bert* is probably the most fluid and enjoyable home version of the Gottlieb arcade game, despite the monochrome character graphics, which give Q*bert and Sid the Snake a slightly ghostly appearance.



Montezuma's Revenge (1983)

With nine huge levels, each constructed from a pyramid-shaped stack of up to 100 screens, it'll take some trying to grab the full quota of Aztec goodies. If you don't believe us, check out the impressive game maps at **tinyurl.com/39ujg8p**.



Gyruss (1984)

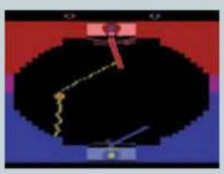
Faithfully capturing the look, feel and pacing of Konami's innovative shoot-'em-up, the C64 version of *Gyruss* is a technically stunning piece of work, especially given how early on in the life of the machine it was created.



Mr Do's Castle (1984)

If you can look past the C64 iteration's chunky visuals and oddly subdued colour palette, you'll find the best home version of this underrated sequel, proving that Parker Brothers' developers understood what made arcade games tick.

THREE TO AVOID



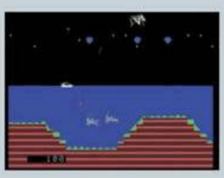
Star Wars: Jedi Arena (1983)

Rex Bradford's *Empire* sequel isn't entirely without merit, and the game's paddle-controlled, Force-battling lightsaber concept is an intriguing one. As Rex himself admits, the end result doesn't work quite as well as it should have, but it's an interesting curio.



GI Joe: Cobra Strike (1983)

This adaptation is decidedly strange, seeing players protecting troops from a mechanical cobra with what appear to be moving dustbin lids. When it was released in the UK it was rebranded *Action Man: Action Force*, despite the presence of the now-unrelated giant snake.

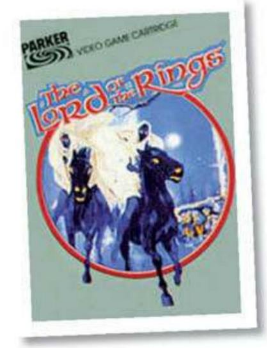


James Bond 007 (1983)

Originally advertised as an action-platformer based on the train scene from *Octopussy*, what we got was an ill-advised *Moon Patrol* knock-off supposedly inspired by *Diamonds Are Forever, The Spy Who Loved Me, For Your Eyes Only* and *Moonraker*.

way," says Dave. "If someone copied a successful game, PB could rely on the game's creator to go after the infringers."

The company published just one original game that wasn't based on an existing arcade title, movie or TV brand; a platform adventure called *Montezuma's Revenge*. It wasn't developed in-house, but by a young programmer called Rob Jaeger. "I first met the people at Parker Brothers at the 1983 Consumer Electronics Show," remembers Rob. "I rented a small booth and was planning on marketing the game through my company Utopia Software. At the time I was 16 years old and my father operated the booth with me. We noticed people with Parker Brothers name tags frequently coming by to look at the early prototype of *Montezuma*. They eventually approached us to discuss business and how their company could handle the marketing. At first I was actually reluctant, but I was very pleased to have such a legendary games company market my game."



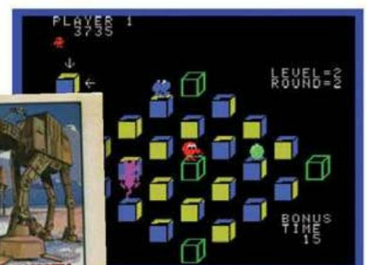
The original game, programmed for the Atari 400/800, featured a premise similar to Activision's *Pitfall!*, in which players guided hero Panama Joe on a quest through several large flick-screen catacombs in search of Aztec treasure. "With the popularity of the Atari 800 and its impressive graphics hardware I'd wanted to start something new and in a larger scale that would take advantage of all this power," says Rob, describing the game's origins. "I had a lot of ideas I was kicking around in the climbing/exploration/puzzle-solving genre. My friend Mark Sunshine suggested going with an Aztec theme and calling the game "*Montezuma's Revenge*" as a joke. Mark is credited in the opening sequence of the original version." Parker Brothers' faith in the game was such that it was converted to a large number of console and computer platforms, including a Spectrum incarnation re-dubbed *Panama Joe*.

There and back again

As *Return Of The Jedi* hit cinema screens in 1983, Parker Brothers was putting the finishing touches to a fresh batch of *Star Wars* games. A deal with Atari had secured the rights for the home versions of the *Star Wars* arcade game, programmed in-house across platforms including the Colecovision, Atari 800 and Commodore 64, to varying levels of success. Rex Bradford designed the 2600 title *Jedi Arena*, inspired by a scene in the original film where Luke duels a laser-spitting Seeker orb. An interesting two-player concept, the final game was let down slightly in its execution. "It started out as an idea where you would use the Force to mind-control the ball in the middle, with a form of magnetism to control it," says Rex. "I could never really get it to work, and finally I proposed the *Breakout* mechanism we ended up with. I was never very happy with the game, for the obvious reasons."



» *The Return Of The Jedi* and *Empire Strikes Back* ads featured some pretty cool *Star Wars* art.





» [2600] The initial *Breakout*-style screen from *Return Of The Jedi: Death Star Battle*.





» A Parker Brothers reunion organised by Laura Nikolich in 2006. Left to right: Ed English, Rex Bradford, Steve Kranish, Charlie Heath, Jim McGinnis, Laura, Larry Gelberg, Ray Miller.



» [Atari 2600] *Frogger II: Threeedeep* added some brand new underwater levels… and ducks.

"I designed Lord Of The Rings with high hopes that it would be the first in a series"

MARK LESSER ON PARKER'S ILL-FATED TOLKIEN LICENCE

A third original 2600 *Star Wars* title, *Death Star Battle*, tied in directly with the new film, and featured another *Breakout*-style concept where players piloted the Millennium Falcon through a block-like shield to destroy Vader's unfinished star-base. The proposed fourth game in the franchise, *Ewok Adventure*, would have starred the pint-sized heroes of the title in a technically impressive *Zaxxon*-esque kite-flying romp. Author Larry Gelberg proposes that Parker Brothers' management thought it better to support a single title rather than two Jedi-based releases. There were signs that the market was shrinking in response to a deluge of opportunistic videogame manufacturers flooding cartridges into stores.

Some Parker employees felt stifled by the lack of creative opportunity imposed by the 'no original games' policy. "That was the impetus behind Ed English and Ed Temple leaving to form their own company, and behind the 'Gang of Five' (Jim McGinnis, Rex Bradford, Charlie Heath, Mike Brodie and me) leaving to join Activision," admits Dave. "Parker Brothers' management had instituted a very lucrative profit-sharing arrangement shortly before all of those departures; those of us who left walked away from a lot of money. This prompted them to do everything they could, short of crediting the developers, to keep the rest of the engineering team intact. The Parker Brothers developers made a lot more money than those of us who went to Activision, got sent to the consumer electronics and had really cool development tools. A million-dollar DEC 2080 computer was coming online as I was leaving. Parker Brothers had also bought a New England Digital Synclavier – one of the very first high-end digital music synthesizers – to help with music and sound-effect composition."

Ranny Barton's 'money is no object' stance didn't last. The most intriguing casualty of the rapidly dwindling 2600 market was a licence of Tolkien's *The Lord Of The Rings*, Mark Lesser's final project at Parker Brothers. "I designed *Lord Of The Rings* with high hopes that it would be the first in a series," explains Mark. "The Hobbits were on the run to Rivendell, with the Black Riders in close pursuit. The game was completed, including packaging, and then, once again, the axe. I think the game was too ambitious for the limited graphic bandwidth of the Atari, but there were no doubt overriding business reasons for not publishing it. The only game I remember getting out the door was *Frogger II*. The game was somewhat successful, but it was shortly after that the odd conglomerate of quirky game programmers on the top floor of Parker Brothers' headquarters in Beverly, Massachusetts was disbanded – a story unto itself."



The internal games division gone, Parker Brothers flirted with console publishing following a minor deal in 1987 to produce titles for the Master System, including an update of *Montezuma's Revenge*. In the Nineties, under the ownership of Hasbro, it outsourced some of its well-known properties – Monopoly, Trivial Pursuit and Risk – but never again would it pool its resources so spectacularly into videogames as it had in the early Eighties. "The company was swimming in an unfamiliar pond, and never seemed to have a game plan," reflects Mark, sadly. "They could have got cool games out of this group if they'd had some vision, but there just was none." Perhaps those involved can find solace in what George Parker once said: "Games help the world along. Making games is something you can look back with pride, and not a particle of regret."

RISK AND PROJECT ZELDA

Designer Steve Kranish was involved in a project, codenamed 'Zelda', which aimed to distribute the company's 2600 game catalogue into homes via a cable TV signal. A prototype was developed, but Parker pulled the plug when 1983's crash loomed. "It had the potential to be a big money maker," says Steve. "As most of the industry discovered long ago, subscriptions are the way to make money. But as with many companies, Parker was largely a follower, not a leader. The vision was somehow there, but the required guts did not follow."

Alongside the port of *Frogger*, Steve was also behind an aborted adaptation of Risk for the same system. Like fellow co-workers, he remains critical of Parker's refusal to develop original, non-licensed games. At one point, the company sent us all to a seminar about how to be 'more creative'," he tells us. "A rather bizarre idea from a company that tried its best to discard all internally created ideas. I can proudly say that I was kicked out of the seminar!"



Die Hard

YIPPEE-KAY-YAY, PC GAMER

RETROREVIVAL

» PC DOS
» DYNAMIX
» 1989

Considering the high-octane action that takes place during the film, it should come as no surprise to learn that *Die Hard* has been the subject of several videogames since its release.

Enjoyable efforts have appeared over the years, including Sega's superb *Die Hard Arcade* and Probe Entertainment's excellent *Die Hard Trilogy*, but we'd argue that Dynamix's entertaining – if a little fiddly – PC effort was easily the most ambitious.

Published by Activision and released scarcely a year after the film turned Bruce Willis into an action hero, Dynamix's take was of an extremely high standard, boasting impressive Gouraud-shaded polygons, multiple endings and often inventive gameplay.

Starting off in one of the Nakatomi Plaza's many bathrooms, your goal is to rescue your estranged wife and off as many bad guys as you can along the way. Initially you only have access to a small clip of bullets so you'll need to rely on the game's admittedly fiddly combat system, which allows you to do everything from duck and block to throwing vicious (and hilarious looking) roundhouse kicks and punches.

Downed guards can be searched for everything from additional guns and bullets to keys, walkie-talkies and lighters, all of which offer their own uses. The lighter, for example, enables you to access certain grates (complemented with digitised stills from the film) while a walkie-talkie will keep you informed of the guard's positions so you know exactly where they are.

There's also a strict time limit to consider, with a little over 20 minutes given to complete the game. Considering you have to alert the authorities, defeat the bad guys, destroy a helicopter, rescue your wife and send villain Hans Gruber plummeting off the side of the plaza, you quickly realise that every precious second counts and the game starts becoming incredibly tense as a result.

Yes, its combat system is laughable (enemies lunge towards you like extras from *West Side Story*), and the controls take an age to master, but stick with it. Beneath the exterior is an entertaining game, and one that actually does justice to the movie it's based on. *





Illustration courtesy of **Dave Rowe**



March of the Lemmings

The Complete History of Lemmings

Marching all over the games industry in the Nineties, Lemmings put DMA Design on the map, shot puzzles to almost platform levels of popularity, and did nothing to dispel the myth that lemmings have the lowest self-esteem of all rodents. Lending their lives to the most famous and popular puzzle game series after Tetris, the lemmings came, they died, they conquered

Although March would have been the obvious month to release *Lemmings*, DMA Design's dim-witted rodents officially landed on Valentine's Day 1991. They didn't fall from the sky, as was once hilariously supposed in the 16th Century, but via two blue diskettes for the Commodore Amiga. Such was their popularity, though, that within a year they had migrated from 16-bit to 8-bit machines; computers to consoles; televisions to portable screens. Cliff diving into cold, rocky waters was the only way to escape their little green mops.

On reflection, the original *Lemmings* was a genius concept and wholly deserving of the success and popularity it gained. Whereas most puzzle games in the past had been simple but addictive games of matching colours, affixing shapes or completing unfinished tracks, *Lemmings* injected colour, humour and character into the genre. From its squeaky mammalian heroes to its outlandishly themed levels and swinging music, it was a puzzle game that was kitted out in colourful accessories more common to platform games. Capturing the humour and visual style of Eighties games like *Jet Set Willy* and *Monty Mole*, *Lemmings* changed the landscape of the genre forever and became another fine example of quintessential British gaming.

Let's born!

The concept of *Lemmings* was created by developer DMA Design (now Rockstar North). Based in Dundee, the studio was established by David Jones, Mike Dailly, Russell Kay and Steve Hammond, and *Lemmings* was the game that helped to put the studio on the map.

At the time, DMA had begun gaining a reputation for producing decent-looking but hair-pulling shooters on the Amiga, in the form of the Psygnosis-published titles *Menace* and *Walker*. And although *Lemmings* was a big departure from the software house's previous frantic titles, its genesis is still intrinsically linked to the shooter genre.

While working on the graphics for the game *Walker*, the sequel to *Blood Money*, freelance artist Scott Johnson set about trying to create small human characters for the game's Walker mech to shoot at. This idea led to him designing humanoid sprites inside a 16-by-16 pixel box. Programmer Mike Dailly remarked that the characters could be shrunk down and constructed within a smaller 8-by-8 box and so, armed with an Amiga, one lunchtime Mike set about proving his theory right. Within an hour, he had not only succeeding in shrinking the characters down but animating them too. The animation he produced showed one line of characters – at this point they looked like lemmings but had spiky blue hair and wore grey slacks and red shirts – getting squished by a ten-ton weight, while another hapless procession was blown to bits by a gun. Upon seeing this, colleague Gary Timmons then made a few improvements, making the characters move more fluidly and adding a few more death devices to the animation.

Another member of DMA who was integral to this tale was Russell Kay. Writer of the PC version of the game, it was he who saw this animation and first commented that there was a game idea in it, ultimately setting the ball rolling. It was also Russell who is credited for christening the characters 'lemmings' and for putting together the first true demo of the game. Unveiled at 1989's PCW show, and later shown to Psygnosis, the game's eventual publisher, the wraparound single-screen demo he wrote for the PC showed the lemmings marching from left to right and in their familiar green-haired and blue-bodied colours. Incidentally, these colours came as a result of the PC's limited EGA palette, which was only capable of displaying 16 colours on screen at any one time.

But while DMA was confident that it had something unique in *Lemmings*, getting publishers to share in its enthusiasm proved to be difficult.



Downhearted but not undeterred, the team continued on without a publisher. It was around this time that David Jones joined the project as lead programmer.

Like most classic puzzle games, *Lemmings*' charm and appeal is its simplicity. Based on the myth that lemmings are a suicidal bunch, the game sees a troupe of them enter the stage through a trap door and then begin mindlessly walking with complete disregard for whatever dangers were in their way. The aim of the game was to get all of your lemmings, or the required quotient, safely to the level exit. To achieve this task you had to assign various roles to the lemmings to help them bash, dig, build and even self-detonate their way to wellbeing.

Lemmings took DMA around a year to develop, and its quick turnaround was largely attributed to the game's level editor. Inspired by the simple and user-friendly interface of the popular Amiga graphics utility Deluxe Paint, a program with which the team was familiar, it not only allowed levels to be constructed quickly, but also made it easy for each member of the team to contribute and chip in with designs.

In fact, it wasn't until many of the levels in *Lemmings* were actually finished that DMA finally found a publisher. Turned down initially by Psygnosis at the early demo stage, with working levels the publisher, now able to visualise the concept, snapped up the game. And so, following a period of testing and note-passing between both companies, further tweaks and refining to the game were made and *Lemmings* was finally ready for release. Hitting stores in February 1991, it sold over 50,000 copies in its first day of sales, smashing sales numbers of previous DMA titles. *Lemmings* found widespread acclaim and was praised for its originality and addictive brain-teasing properties.

As a result of the reception, *Lemmings* became one of the most ported videogames of all time. Not only did it find release on popular consoles such as the Mega Drive, Super Nintendo and Game Boy, but also machines as diverse as the Philips CD-i, 3DO (in Japan), FM Towns Marty and TurboGrafx-CD. At one time even a trackball-controlled coin-op version by Data East was in development, but, though finished, it never saw release. A US prototype of the game is available to play via MAME, and while we're not sure how close it plays to the intended finished game, what's there plays like a straight port of the original, with the main differences being that it runs a bit smoother, the colours appear muted, and players can select the level on which they wish to start the game.

The reason why the coin-op version of *Lemmings* was never released remains uncertain, but rumour has it that the explanation could lie with it not being very well-received during focus testing. It's a theory that would certainly make sense. With arcades more commonly reserved for high-octane, money-grabbing joyrides, *Lemmings* certainly isn't what you would consider typical arcade fodder. Especially as players who got half-decent could potentially be playing for hours on a single credit – hardly a pleasing sight for arcade operators.

To capitalise on the game's popularity, DMA and Psygnosis quickly followed up *Lemmings* with *Oh No! More Lemmings* later that year. An expansion pack for the original game, it was released in two forms: a standalone version and data disk format that required the original game to run. *Oh No!* featured 100 new single-player stages and a handful of new multiplayer levels. Like most early expansion packs, it didn't bring anything new to the series and its gameplay keeps to the original eight tools. But while *Oh No!* clearly looked to quickly and cheaply eke more from *Lemmings*' popularity, the level designs don't quite match the quality of those in the original



» [Arcade] An arcade version of *Lemmings* was developed by Data East. While never released, a prototype of the game can be played thanks to MAME.



» [Spectrum] *Lemmings* even made it to the Spectrum. It might have been fiddly to play in monochrome, but the game's charm still shined through.



» [Arcade] *Lemmings* isn't suited to the coin-guzzling instant-action approach of most coin-ops of the time, which makes the fact that it never made it out fairly unsurprising.



"Once able to visualise the concept, Psygnosis snapped up the game"

Meet The Tribes

Shadow



This weird shadow tribe are a team of SAS-style operatives who dress like ninjas. Their stages are set in towns under the cover of darkness and are generally full of booby traps and sneaky hazards that only a master spy could outfox. Good thing these guys don't wander blindly into them, then. Oh…



Cavelem



It's very much back to basics for this Stone Age tribe, whose land has a prehistoric theme. Their stages are full of volcanic rocks, sticks and fossilised dinosaur remains. There's even the occasional probably extinct creature to lend a hand to the lemmings' plight as they head off on their quest.



Space



The most impressive-looking zone in *Lemmings 2: The Tribes* takes place on a space station, replete with shuttles, cranes, space rock and even a cameo from what appears to be the Power Loader from *Aliens*. Sadly, the lemmings can't make use of them. And how is there outer space on this island?



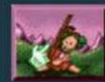
Polar



This tribe clearly got the iffy-smelling end of the stick when the lemmings split off into groups. This area is punishingly cold and features stages in which fans of the Christmas spin-off games will feel right at home. The lems on this stage are also a worrying shade of hypothermic blue.



Highland



Given that DMA Design was based in Dundee, it's understandable that the studio would look to instil its Scottish heritage into a tribe, and so the Highland lems can be seen as a clan designed entirely out of nepotism. Anyway, this zone is based on the weather-beaten glens of the Highlands.



Sports

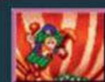


The most nimble and athletic of all the tribes, these sporty types should presumably be the first to reach the island's centre. Their zone is pretty bland in comparison to the rest, featuring artificial turf flooring and various sporting goods strewn around the place, providing obstacles.





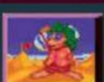
Circus



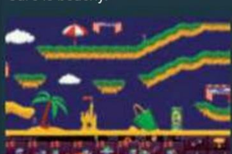
This circus-trained tribe are the most acrobatic of all the lemmings, which is very handy as their zone is full of circus objects to circumvent, including barbells and even cannons for the lemmings to alight and fire themselves from. Pretty dangerous for a place of fun.



Beach



This tribe certainly lucked out by getting to live out their days in a permanent holiday resort. These sun-kissed lems must negotiate stages littered with beach items and accessories, including beach balls, beach huts and deckchairs. Life for these guys sure is beachy.



Outdoor



Given the obvious affinity they have for walking, you'd expect lemmings to be keen ramblers. The great outdoors is the theme for this stage, and features puzzles set inside dense woodland dressed with giant flora and oversized shrubbery. It's a pretty boring place, to be honest.



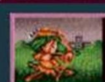
Egyptian



We think DMA missed a trick by not having the lems walk like Egyptians in this stage. Still, we guess it could have been quite off-putting. This zone is caked in yellow sand, set inside ancient Egyptian tombs, and features plenty of sphinxes and pyramidal structures to circumnavigate.



Medieval



This zone is home to a tribe of lemmings who are clearly stuck in the past because they enjoy a bit of LARPing. Their land is themed to the Middle Ages, and so castles, battlements and ramparts form the theme for this stage. The levels are decorated with uninviting stone gargoyles.



Classic



As their name implies, classic lemmings are a tribe who like to stay true to tradition. Not only are the levels in this zone all reminiscent of those in the first game, but this tribe can only make use of their original eight skills as well. They're also the only lems who can use the Blocker tool.





Lem vs Lem

WHILE WE'VE DISCUSSED the brilliance of *Lemmings* as a single-player game, we shouldn't forget its amazing split-screen multiplayer mode. Comprising 20 stages that were especially designed for two players to go head-to-head in, it quickly proved a popular addition with fans. The mode sees two players competing against each other using their individual tribe, which are differentiated in the game by two colours. Able to only give commands to their coloured lemmings, the winner of the game is the player who successfully manages to shepherd the most lemmings, irrespective of colour, into their goal. Shovelling more tension into the action was the fact that in later stages the two tribes would cross paths, allowing the opportunity for players to interfere with and sabotage their opponent's game. While omitted from the PC version, multiplayer did make it into the Atari ST conversion and a number of the Sunsoft-developed console ports. It's just another aspect that makes *Lemmings* a fiendishly addictive experience, and so we can't understand why, with the exception of *Christmas Lemmings* in 1994, it was dropped in DMA's sequels.



– and this is also reflected in the erratic complexity of the puzzles. Levels begin as relative cakewalks but soon become torturous crawls across hypodermic needles and broken glass. Or maybe that's just us being dramatic.

A tribe called (on a) quest

Given the criticism that *Oh No! More Lemmings* received for not pushing the series in any new directions, there was really only one natural step for a true sequel to take: introduce new abilities and skills for players to get to grips with. Bring on *Lemmings 2: The Tribes*, which did just that.

While the core 'guide the lemmings to safety' concept remained, DMA made a number of notable tweaks to the formula in *Lemmings 2*. This included a little over six times the number of skills as were in the original game for a total of 51, and also a story explaining why the critters are once again insisting on risking their little lives in the name of interactive entertainment. The story told that the lemmings from the first game had decided to live out the remainder of their days on the peaceful Lemming Island. Here they divide themselves into various themed tribes, each relating to the 12 territories of the isle. An undisclosed amount of time elapses, and each tribe grows in number and learns the abilities that best allow them to survive in their respective zone. But their peace is soon threatened when they learn that a great darkness is about to spread across the island. To prevent their extinction, each tribe must journey to the island's centre and combine 12 pieces of a sacred talisman to summon a flying boat that will ferry them to safety. It's as good a story as any, we suppose.

As well as adding a narrative and an exhausting number of new abilities, the way in



» [PC] *Oh No! More Lemmings* was an expansion rather than a full sequel and so offered more of the same for fans of the original.

which players progressed in the game was also changed. In *Tribes*, completion of a stage only requires players to get a single lemming to the exit. With one saved, any lemmings on screen would then be automatically whisked to the next stage. However, this didn't mean you could sacrifice the lives of 99 per cent of your tribe for the salvation of one. Unlike in the original, their numbers weren't replenished at the start of a new stage. As such, players had to be mindful of a depleting lemming populace, otherwise they'd come unstuck by not having enough lemmings to complete the latter stages in the game. Considerately, the 120 levels were divided into bite-sized batches of ten, and when caught in the crossfire of an explosion or falling from a great height, lemmings now became dazed for a few moments rather than dying outright like in the previous game. The strategy you employ is very often a different approach to the original, as success can be achieved by cordoning off most of the tribe and then allowing a single lemming or a small number of them to venture out and find the exit.

While some fans liked this new approach, there were just as many who didn't, and reviews reflected this. Not only did *Lemmings 2* not score as highly, but it also wasn't as successful as the original, although this could have had something to do with it not receiving a fraction of the number of conversions that the original *Lemmings* received.

Following the release of *Lemmings 2*, DMA Design then released a festive-themed version. Titled *Christmas Lemmings* (aka *Holiday Lemmings*), it was a short game that was inspired by two earlier freebie Christmas-themed *Lemmings* demos put out by DMA in 1991 and 1992. This year, however, a less charitable DMA cheekily charged fans for its annual *Lemmings* Christmas present, justifying its actions by offering 32 levels. *Christmas Lemmings* reverts back to the look and gameplay of the first game, with the lemmings relying on their original eight skill sets. Dressed in festive bobble hats and Santa suits, the lemmings had to negotiate stages decorated with snow and bunting. Proving a popular spin-off among fans, DMA followed up with a retail sequel the following year. *Christmas Lemmings 1994* featured another 32 Christmas-themed stages, as well as the previous 32 from the 1993 version and a two-player mode.

The next sequel not only marked the final *Lemmings* game from DMA before the licence was sold to Psygnosis, but also the final *Lemmings* game for the Amiga and the final true 2D game in the series. Unfortunately, though, it's probably the least popular instalment in the series. Titled *All New World Of Lemmings* (also known as *The Lemmings Chronicles*, though many fans refer to it as *Lemmings 3*), it once again tasked players with guiding the misguided rodents to safety, but both the art style and gameplay were dramatically altered for the game. *New World* featured larger, cuter, cartoon-looking lemmings and a simplified tool interface. Instead of giving players all the tools they would need to complete a puzzle from the outset, many of the required actions were now scattered around the stages for the lemmings to pick up.

The lemmings now had unlimited use of five basic actions: Block, Run (changes a blocker into a walker), Jump (allows the lemming to hop over obstacles), and a Use and Drop button to interact with the tool objects. Unsurprisingly, many didn't gel with the new look or approach. DMA also carried over the previous *Lemmings 2* method of progression, and added further headaches in annoying enemy creatures for the lemmings to avoid. If the classic *Lemmings* recipe was two parts puzzle game to one part platformer, this sequel can be seen as the unsuccessful results of having those measurements switched.

Featuring just three of the 12 tribes, at the time of *New World*'s release it was reported that Psygnosis was planning to release a further three updates to the game, starring the remaining nine. However, likely due to modest sales and middling reviews for the game, the sequels never materialised.

"While some fans liked Lemmings 2's approach, there were just as many who didn't"

The jump to 3D

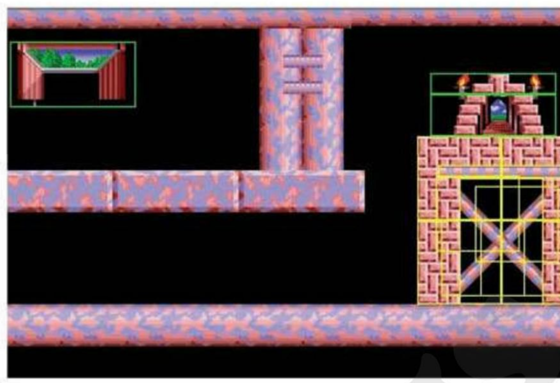
Despite the huge impact that the fifth generation of polygon-loving consoles had on 3D gaming, it would be fair to assume that no one would have predicted that *Lemmings* would make the jump to a third dimension. Psygnosis certainly felt that the transition was possible, however, and enlisted developer Clockwork Games to make it happen.

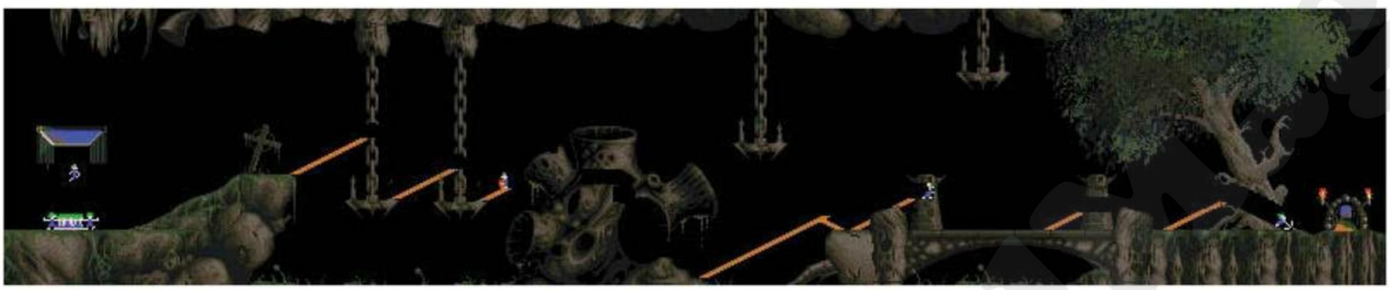
To its credit, in many respects *3D Lemmings* is perhaps closer in 'feel' to the original *Lemmings* than any of the previous sequels. Released for the PC, Saturn and PlayStation, it not only saw a return to the original skills – with the exception of a new and necessary Turner tool, which allowed a lemming to direct their compatriots 90 degrees in either direction – but also some brilliantly clever level design, as well as a return to the original 'save as many as you can' progression.

The biggest thing you have to wrap your head around is learning how to use the game's camera to your advantage – in some instances this is essential to completing the more taxing stages later in the game. Having to think in an extra dimension takes some getting used to, but to the game's credit it seems to understand this fact. Not only does it allow you practice using the various

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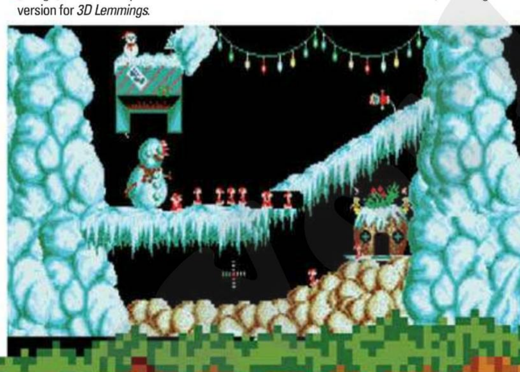
AT ONE POINT DMA was planning to include a level constructor with the original *Lemmings*, allowing fans to construct their own stages in the game. However, wary of the time it would take to successfully plot and design a working *Lemmings* level – you can't just plonk a load of rocks and pillars on a stage and call mission complete – the idea was dropped. Fans actually had a long wait until they finally got the opportunity to construct their own levels. The PSP version by Team17, released in 2006, marks the first *Lemmings* game to ever officially include a level creator. However, it's not actually the first level editor for *Lemmings*, as some clever so-and-sos took it upon themselves to construct their own. LemEdit and Lemmix are two freeware *Lemmings* level creators for the PC, which allow you to prune and tweak the stages in the original game. Use of them requires you to have a copy of the PC version of *Lemmings*.







» [Amiga] The '*Xmas*' spin-offs were so successful that a total of five were made, including a version for *3D Lemmings*.





The Lost Lemmings

The lesser-known Lemmings games and spin-offs that you may not have heard of



Lemmings Handheld Game
Released by Systema, this portable LCD *Lemmings* game is nothing like the original. It's a scrolling platformer that sees you helping a lemming jump various obstacles and smash through walls with a pickaxe.

Covox Lemmings
This is a special version of *Lemmings* that was produced as a promotional pack-in with Covox PC sound cards. What makes this edition special is the fact that it features an additional seven stages over the original, as well as a special 'Covox' stage.





Lemmings: The Official Companion Book
Given the perplexing nature of *Lemmings*, it was a given that a solution book would sell, and a canny Psygnosis decided to capitalise on the idea quickly by publishing one itself. This particular guide book is unusual, though, in that it came packed with a disk featuring an additional 16 new stages.

3D Lemmings Winterland
This is a 3D version of *Christmas Lemmings* and was packed with *3D Lemmings* during the festive period. The game came on a separate disc and was only included with the PC version. It features six specially designed *3D Lemmings* stages that are all winter-themed.





Vs Lemmings
While it might sound like a standalone *Lemmings* game, *Vs Lemmings* is actually just the fancy-sounding Japanese title for the Game Boy Color port of *Lemmings* and *Oh No! More Lemmings*. Incidentally, this double pack was also released for the PlayStation.

functions and tools – an option introduced in *Lemmings 2* – but it also has a very handy replay mode that recounts your previous attempt and allows you to rejoin at any point, saving you the time and effort of having to redo the bits you know you did correctly. But the indisputable thing that makes *3D Lemmings* awesome is that it's the first *Lemmings* game to finally solve that irritating issue of trying to pick a single lemming from a crowd. Previous games saw you wasting time and tools waving your cursor around a twitching mess of green and blue pixels, hoping that your cursor touched a piece of a lemming facing the right direction and area to make the desired use of the tool you've selected. Here, the problem is solved by allowing you to select any lemming in the game before administering an order. And you can also make use of a handy thing called VL (Virtual Lemming) mode, a function that slots you into the body of a selected lemming and allows you to see what they see.

After leaving DMA in 1993, programmer Russell Kay set up his own development studio in Dundee called Visual Sciences. It was here that he and the *Lemmings* series would cross paths again, when Psygnosis asked the studio to develop its next *Lemmings* game. *Lemmings Paintball*, released in 1996, was a big departure from previous titles. Similar in style to *Syndicate*, of all things, the game was a fun but bizarre isometric shoot-'em-up with loose puzzle elements. Assigned a troupe of four lemmings, each armed with a paintball gun, players had to battle an opposing team of enemy lemmings across 100 levels to capture flags scattered around the stages. Players could control either a single lemming or move the team as a complete unit, and certain instances called on the lemmings to interact with switches, catapults and other random objects to get around the level. A first for the series, the game also featured online multiplayer, allowing two people to go head-to-head in a game of capture the flag. Released exclusively for the PC, the game, unsurprisingly, went largely unnoticed.

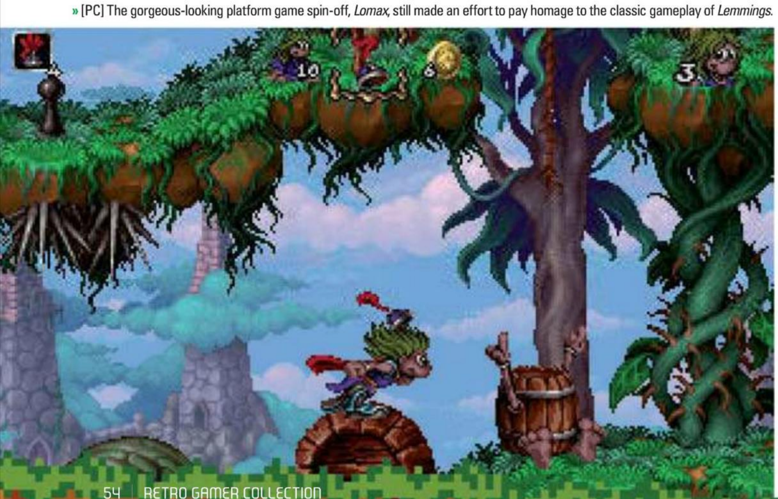
> "3D Lemmings is closer in feel to the original Lemmings than any of the other sequels"

In 1997, *Lemmings* finally made the jump into full platform game territory for the PC and PlayStation spin-off title, *The Adventures Of Lomax* (aka *Lomax*). Co-written by Erwin Kloibhofer and Henk Nieborg, whose previous collaborative efforts included the Psygnosis platformer *Flink* and the Amiga hack-and-slash *Lionheart*, *Lomax* was typical of the duo's previous games, boasting stunningly vibrant visuals coupled with solid gameplay.

Players assume the role of the titular Lomax, a lemming from the medieval tribe who must embark on a quest to save his pals, who have all been transformed into enemies in the game by an evil alchemist. In a nice wink to classic *Lemmings*, Lomax has the ability to pick up and make use of a number of different practical powers in the game, some of which were clearly influenced by the traditional tools of his trade. While *Lomax* does fall into the realm of standard platformer, it's a wonderfully presented game with visuals very reminiscent of Ubisoft's *Rayman* series, and is certainly worth tracking down if you're a *Lemmings* fan.

The next *Lemmings* game to find release was developed by Take-Two Interactive. Released in 2000, *Lemmings Revolution* was another PC-only sequel that was clearly more inspired by the original *Lemmings* than the sequels. The big difference here is that levels are wrapped around a cylinder, which the player can rotate to get a full perspective of its dangers and pitfalls. The footprint of the original can be seen throughout *Revolution*, with the original eight tools once again making a return and its 3D visuals capturing its iconic ant farm look. Moreover, other additions and changes that *Revolution* makes are really quite subtle. In addition to classic lemmings you now have water and acid

» [PC] The gorgeous-looking platform game spin-off, *Lomax*, still made an effort to pay homage to the classic gameplay of *Lemmings*.









variants, which can swim and survive a bath in the acid respectively. Also introduced are various environmental objects for the lemmings to interact with. These include speed-up and anti-gravity panels, floors that break away, and even teleportation portals. *Revolution* also unfurls via branching stages. This means that if you do get stuck, just like in the Gold Run in *Blockbusters*, you could progress via a different route to finish the game. *Lemmings Revolution* ranks as another strong entry in the series. It successfully walks that delicate line of feeling fresh and playing faithfully to its source.

The final true *Lemmings* game was first released in 2006 and in many ways came to prove what most had known all along: the original *Lemmings* is the best in the series. Developed by Team17, *Lemmings*, as its title implies, is a remake of sorts. But one that features 36 new levels on top of the original 120 and a level editor – a first for the series, at least officially – which, while a little cumbersome, allowed players to create and share stages.

Given Team17's renowned background in the puzzle genre with its *Worms* series, it should come as no surprise that 2006's *Lemmings* is another strong sequel in the canon. Clearly influenced by the cartoony art style of *Worms*, aesthetically it blends both worlds together.

A PS2 version of *Lemmings* was also released in the same year. Known as *EyeToy: Lemmings*, this spin-off added a number of levels that supported gesture recognition through Sony's webcam accessory to allow players to use their body to bridge gaps and shepherd the lemmings to safety.

A third downloadable PS3 version of Team17's *Lemmings* update also saw release a year later on PSN. Keeping the same art style as its portable and PS2 counterparts, this port only featured 40 levels – all of which were new, however – and the multiplayer and the map editor were also dropped. On top of this, it also fiddled with the gameplay by dropping some of the tool power-ups into the actual levels, in a similar style to *All New World Of Lemmings*.

Looking back at the series in its entirety, it becomes clear that *Lemmings* is a franchise that showcases the difficulties faced by developers if they get a concept so wonderfully tight and perfect first time round. It's arguable that most of *Lemmings*' charm, success and popularity comes from the potent hangover from how innovative the game felt back in the early Nineties. The problem, as anyone tasked with following up *Tetris* will attest, is that it was always going to be impossible for any sequel to replicate its impact. For DMA and Psygnosis to not push the franchise in new directions would have been sending the lemmings to their doom. As a result, that wonderful formula of the original was tweaked, and so with each new sequel, and every new idea added, inevitably some aspect from the original was either lost or dropped. We guess you could dispute the notion that the little critters were doomed the minute the trap door opened and they fell into 'Just Dig' and burrowed themselves into our hearts. Maybe lemmings are suicidal after all.

Special thanks to **Andrew Madsen** of Lemmings Universe (**www.lemmingsuniverse.net**) for his help and assistance with photos and images. Also to **Ian Barlow** for his *Lemmings* skills and knowledge.



NO JOB TOO SMALL

Lemmings are a versatile bunch, capable of some quite obscure skills...



Minority Report



Over the last few generations, gaming platforms have come and gone, and some have made a great impact; others perhaps less so. **Mike Bevan** looks at hidden gems available on some of the less mainstream systems, and cult games on some of the more well-known…

NEMESIS '90 KAI

■ SYSTEM: SHARP X68000 ■ DEVELOPER: KONAMI ■ YEAR: 1993

» SHARP X68000



» [Sharp X68000] *Nemesis '90* is an updated version of *Nemesis 2*.

■ **Prior to the** release of the Neo Geo, Sharp's powerhouse computer was the most advanced home system around, with capabilities remarkably close to those of arcade hardware of the time. Released only in Japan, its conversions of games like *Strider*, *Final Fight* and *Street Fighter II* far outclassed those on consoles like the SNES and Mega Drive. Alongside support from Capcom with the aforementioned titles, Konami was another A-class developer to show a keen interest in the X68000, with a unique instalment of *Castlevania* – later re-released as the PlayStation's *Castlevania Chronicles* – and authentic conversions of *Salamander* and all three *Gradius* arcade games, plus an exclusive spin-off: *Nemesis '90*.

The game is more specifically an update of the MSX title *Nemesis 2*, with enhanced arcade-quality graphics and sound, and a bunch of bonus levels thrown in. Although appearing in a similar mould to its forebears, the one main departure from the standard *Gradius* gameplay is the ability to acquire new weapon power-ups from enemy bosses. Destroying each of the end-of-stage motherships causes its centre to flash for a few seconds, allowing you to fly your ship through the narrow channel into the unprotected core. A short sub-level then follows, which, if successfully negotiated, may yield all manner of goodies, from vertical Ripple Lasers, to napalm and rebounding Moai projectiles. The new hardware is then bolted onto the traditional weapon-select bar at the bottom of the screen.

Alongside the famous *Gradius* 'multiple'-style pick-ups, you'll also run

» AMIGA CD32



» ROADKILL

■ SYSTEM: AMIGA CD32 (ALSO ON AMIGA A1200)
■ DEVELOPER: ACID SOFTWARE ■ YEAR: 1994

■ **As top-down racers** go, this criminally overlooked title beats the likes of *Super Sprint* into a cocked hat in terms of sheer excitement and pacing. Players are thrown into a *Death Race* meets *Smash TV* world of ultra-violent motorsport, competing for cash, podium position and carnage-induced score across a series of increasingly complicated circuits. Drivers are aided to victory by *Spy Hunter*-style rockets, guided missiles and other assorted upgrades, while designated 'Kill Zones' add to the fun as you attempt to smash rivals into the spiked walls of the track for quick kills while the barmy announcer screams: "Take his life!"

» ATARI 400/800



» NECROMANCER

■ SYSTEM: ATARI 400/800 (ALSO ON C64)
■ DEVELOPER: SYNAPSE SOFTWARE ■ YEAR: 1982

■ **Synapse was one** of the most innovative of the early 8-bit developers in the US, and this unique and frenetic offering from Bill Williams, once called "the Stanley Kubrick of game design", is an example why. The aim is to defeat the evil wizard of the title, firstly by building an army of tree golems by planting seeds while fending off enemies with your wisp-like cursor. Next you progress to the vaults and use your tree army to destroy enemy spiders by planting them above their lairs, as you descend into the depths by activating ladders. Crack this and the final showdown awaits. A very left field, but fascinating, game.

» ATARI 7800



» DESERT FALCON

■ SYSTEM: ATARI 7800 (ALSO ON ATARI 2600/400/800)
■ DEVELOPER: ATARI CORPORATION ■ YEAR: 1987

■ **This curious isometric** shooter is a strange but pleasing mix of blasting action and memory puzzler, as you guide a charmingly animated raptor over a distinctly Egyptian-themed landscape, battling nasties and grabbing treasure. In a departure from most *Zaxxon*-style games, the main character can hop along the ground to pick up collectables, the most interesting being a series of different hieroglyphs. Picking up three of these will grant a special power depending on the combination obtained, leading to an interesting extra level of experimentation in discovering which sequences are most beneficial.

» [Sharp X68000] Destroying the boss's core will yield a treasure trove of bonuses.



» [Sharp X68000] The detailed graphics genuinely were arcade-quality for the time.





» ABOUT THE SYSTEM

- The Sharp X68000 was created by the Sharp Corporation and released only in Japan.
- The very first version was released in 1987 and included a 10MHz Motorola 68000 processor.
- It was used by Capcom as a CPS board development machine…
- …which meant it had some truly stunning Capcom conversions.

into gold spheres, which boost your ship's power temporarily. These vary in effect, sometimes granting meaty V-shaped lasers, or causing your multiples to go haywire and circle your ship defensively. Rarer consequences include effects like slowing down enemies and bullets, or making your ship invincible for a short time. As the bad guys come in thick and fast, especially on later levels, these effects are very welcome. The stages themselves are for the most part well-designed and varied – standouts include a jungle infested with bullet-spewing vegetation, a crumbling alien ruin that collapses as you shoot your way through it, a landscape teeming with dangerous waterfalls, and an homage to the solar supernova level in *Salamander*. It's definitely worth playing on after the credits roll to see all of the extra levels that Konami tacked on to the game.

It's worth mentioning that *Nemesis '90* is a tough game, even by the standards of the series, with a difficulty curve that pretty much becomes a plateau right from the start. But due to the X68000's Japan-only market base, it's a shame that this remains one of a number of excellent *Gradius* titles to never make it to the West – alongside the PlayStation's remarkable *Gradius Gaiden* – as it's a beautifully crafted game that any shooter fan would probably give their trigger finger and both opposable thumbs to play.

Alternatively, we'd point towards *Gradius V* (PS2) as one of the series' finest moments. A *Gradius* game developed by Treasure? Yes, it's as good as it sounds.



» [Sharp X68000] Don't expect the game to go easy on you, because it's hard as nails.

» APPLE IIE



» AIRHEART

■ SYSTEM: APPLE IIE
■ DEVELOPER: BRØDERBUND ■ YEAR: 1986

■ ***Choplifter* creator Dan Gorlin** followed up his popular arcade-style shooter with this arguably more intriguing game, which took advantage of the Apple IIe's rarely used double hi-resolution mode. The results are an impressive and colourful 3D shooter-cum-adventure in which you control a hovering seacraft in a quest to rescue a missing child while battling enemies from air and sea. As with *Choplifter*, the in-game physics of *Airheart* create an extra level of immersion for players. Gorlin later remade the game for the Amiga and Atari ST in the form of *Typhoon Thompson In Search For The Sea Child*.

» ATARI ST

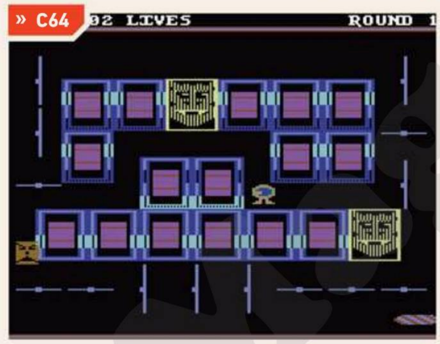


» OIDS

■ SYSTEM: ATARI ST
■ DEVELOPER: FTL GAMES ■ YEAR: 1987

■ **This physics-based** shooter from *Dungeon Master* developer FTL plays like a cross between *Lunar Lander* and *Choplifter*. Piloting your ship across a number of perplexingly complicated planets, you're tasked with rescuing tiny men – the Oids of the game's title – from scattered enemy installations. Naturally the best way to free them from their prisons is to blow them to smithereens, land on a nearby flat surface, and wait for them to hop aboard. Then it's off to the mothership for tea and biccies before your next sortie of Oid-ing. A level creator allowing you to design your own planets tops off the package.

» C64



» DRELBS

■ SYSTEM: C64 (ALSO ON ATARI 400/800)
■ DEVELOPER: SYNAPSE SOFTWARE ■ YEAR: 1984

■ **Another hugely original** premise from Synapse, *Drelbs* is far more difficult to describe than it is to pick up and play. Is it a maze game or a puzzler? What exactly is a Drelb? Either way, it's a brilliant, utterly playable game, with a lead character that looks like an eyeball on legs flitting around the screen, flipping panels to form boxes, hopefully trapping enemies inside en route. All this while avoiding phantom faces, keeping an eye out for mysterious Drelb portals, collecting hearts and kissing girls. We reckon that designer Kelly Jones was definitely thinking outside the box when he came up with this one.







It sold over 32 million units and featured some groundbreaking games. Retro Gamer reveals the best titles and peripherals for Nintendo's console

NINTE



» Manufacturer: Nintendo **» Model:** Nintendo 64 **» Launched:** 1996 **» Country of Origin:** Japan

ENDO64

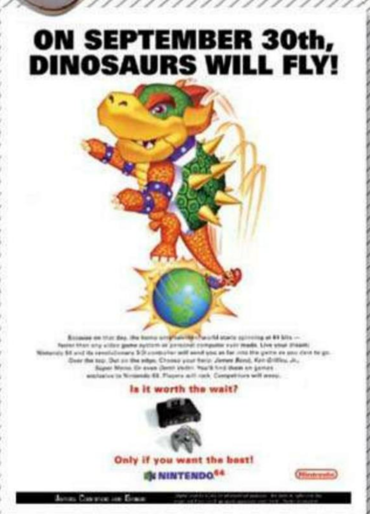
The Collector's Guide



» [Above] There is a huge range of different joypad colours. This all-gold version tied in with the release of Rare's *GoldenEye 007*.



» [Above] RGB scart annoyingly wasn't included on the N64. A mod does exist, but it only works on U.S. and Japanese consoles and a certain French model.





» [N64] It may be massively popular now, but *Animal Crossing's* beginnings were very humble. The original N64 game wasn't even released outside of Japan.



WHY IT'S COLLECTABLE

The Nintendo 64 is home to some truly groundbreaking titles such as *Super Mario 64*, a pioneering platformer that opened the doors to many 3D adventures to come, along with *Conker's Bad Fur Day*, a title from Rare that shook the politically correct foundations of gaming as we knew them. But what about the other side to the Nintendo 64? We all know what its best games are, but what about the most collectible, rarest and most desirable games?

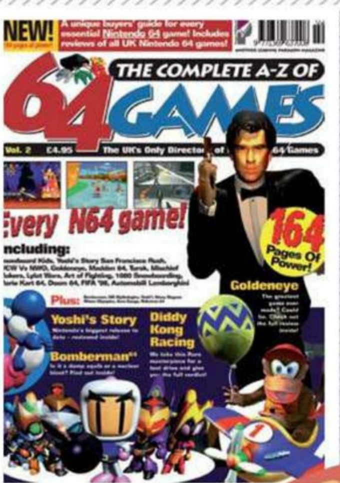
Many undiscovered and rare items can be found within the Nintendo 64 library, which are often the centrepiece of a tussle between collectors. For a system with only 242 games released in PAL regions, it is also a decent starting point for new collectors.

Nintendo opted against using optical media for the N64, which ultimately lost the company its long-standing connection with the *Final Fantasy* series. But in reality it also gained it a fair few fans many years later, fans which Nintendo may have never considered back then. Where collectors are concerned, the majority of CDs haven't survived the transition from new to used as well as they hoped. The poor design of the Sega Saturn cases (which left countless discs to ruin) and the cracked cases of Sony PlayStation games often prohibits collectors from a quick purchase. Games released for the Nintendo 64, however, remain an easy and reliable acquisition due to their robust and reliable shape. With every game sat in a desirable and aesthetic curved cartridge, the form factor of the Nintendo 64 was always more polished than the other consoles on the market at the time.

While these cartridges may have survived a good decade and potentially many more to come, their packaging often remains in a much different state. Just like every other console released under the Nintendo brand before the N64, the games for the system were packaged in gorgeous yet flimsy cardboard boxes. Over the years, the inevitable arrival of accidental and storage damage is often seen with Nintendo boxes. Something you would expect to send collectors away, when in fact it does quite the opposite.

The quest to find Nintendo games in good condition is often a driving factor for many N64 collectors. The fight against a clumsy mail service, poor packaging, sticker residue and more importantly time, makes the hunt just as entertaining as the games themselves. With many collectors now fighting this battle together, a real rise in the value of N64 games has begun to show, as many collectors challenge themselves to find games that could be mistaken for being brand new.

However, it should be noted that it isn't just the packaging and aesthetic value of the Nintendo 64 which drives collectors. The variety and wealth of enjoyable titles on the Nintendo 64 makes it all the more worthwhile collecting them, often more so than other consoles available. Alongside the obvious and desirable games, hard-to-find titles like *Aidyn Chronicles* and *Hercules: The Legendary Journeys* are finding their way into gamers' collections for the very first time. The rarity and obscurity of these previously

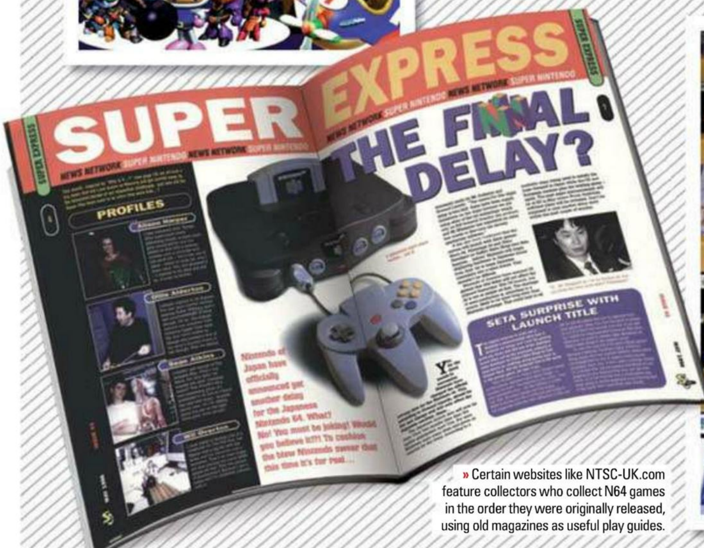




» eBay sales might dictate otherwise, but the Pal version of *Paper Mario* isn't actually that hard to find. It's just pricey.

DID YOU KNOW?

■ A large number of N64 games were only released as rentals in chains like Blockbuster. As a result, they're very desireable due to their rarity and the fact that many of them are often incomplete, as stores would often just rent out cartridges. Rental-only games include *Indiana Jones And The Infernal Machine, Razor Freestyle Scooter, NFL Blitz Special Edition* and the highly rare (especially in complete condition) *Clayfighter 63 1/3: Sculpter's Cut.*



» Certain websites like NTSC-UK.com feature collectors who collect N64 games in the order they were originally released, using old magazines as useful play guides.



» Just a small section of games from Janne Kaitila's impressive N64 and N64DD collection. He's been collecting seriously for around five years and has amassed 394 games.

little-known N64 games comes as a real bonus to new collectors seeking new experiences.

As we all know, Nintendo is no stranger to new iterations of its hardware. With countless versions of the Game Boy available, it came as no surprise when Nintendo began to release variations of the Nintendo 64. Enticing bundles began to arrive such as the *GoldenEye 007* set including a golden control pad and the *Pokémon Stadium* set featuring a *Pokémon* VHS tape and branded console. It goes without saying that these often take centre-stage in a fully-fledged eBay bidding war, but the real collectors often have their eyes set on a more attractive set of consoles. Released late in the life of the Nintendo 64, semi-transparent consoles began to appear on the shelves in a vast range of colours. Out of the bunch, the two-tone clear blue and white console is often found sitting at the top of collectors' want lists, as its exquisite appearance and unforgettable rarity go hand in hand.

Putting official releases aside, even the pirates had a good thing going on the N64. Devices such as *Mr Backup Z64* brought to the N64 the ability to backup cartridges onto Zip disks (or a hard drive with a bit of modification) alongside the *V64 Jr,* which offered a similar approach via a parallel port on a PC. Coming from an 'unofficial' background, and with few places to purchase them from, these backup units sold in very small quantities. Taking into consideration the added functionality these devices offer, along with their elusive nature, they're inevitably the subject of a long line of collectors stepping up to fight for the winning bid on every unit that comes under the hammer.

Last but not least, even the gamers who tend to prefer their games arriving from abroad have more than enough to shout about. On offer lies a rather small yet quaint catalogue of many import-friendly titles constantly changing hands. With heavy-hitting titles *Tsumi To Batsu: Hoshi No Keishousha* (also known as *Sin & Punishment*) and *Bakuretsu Muteki Bangai-O* amongst the pickings, the Japanese auction sites have grown tired of foreign competition for their own treasures.

With all these collecting tips in mind, it should be obvious by now why the Nintendo 64 is so highly regarded. However, this reputation goes much further than the packaging and desire of each title, right down to the sheer quality of games created by Nintendo for its 64-bit system. Titles such as *The Legend of Zelda: Ocarina Of Time* and *Paper Mario* to this day hold many top spots on lists of the greatest games of all time, often accompanied by the likes of *GoldenEye 007, Super Smash Bros.* and *Mario Kart 64.* With such a strong selection on offer, the already rising value and competition of individual titles is only heightened by the playability of the system as a whole.

So the next time you place a recent Nintendo 64 purchase into your collection, take a minute to step back and remind yourself of the potential collection you soon could be housing. With countless console variations of equal worth, a huge back-catalogue of fantastic games and a library of rare treasures to be had, there has never been a better time to get into collecting for the Nintendo 64.

THEPERIPHERALS



» A number of games were cancelled for the 64DD , including *Cubivore: Survival Of The Fittest*, *Earthbound 64* and *SimCopter*.

THE 64DD UNIT

The 64DD (Dynamic Drive) unit, on the surface, appeared to be a strategic decision for Nintendo, in light of the exterior add-ons available for its previous two consoles: the FDS for the Famicom and the Satellaview for the Super Famicom. In Japan, at least. The reality was a lot less smooth. First announced in 1995, it took Nintendo another four years to finally release the unit. Anticipating low sales from the off, the unit wasn't even initially sold via retailers, but as part of a year-long subscription service that guaranteed an online connection (via RANDnet) and availability of software.

Specifications-wise, the 64DD did have potential. Many games in the early days of N64 development were planned to either be sold for or interact with the unit. Gamers drooled at the prospect of a more expansive *Zelda* than was ever thought possible on cartridge, or the ability to dynamically alter worlds depending on choices made during the game. The rewritable aspect of the media opened the possibility of countless customisation, real-time updating, and hopes of establishing another form of cheap mass storage, essential to compete with the CDs being used by the Sony PlayStation.

Whatever the reasons Nintendo had for delaying the unit, it caused irreversible damage to development and the cancellation of most projects assigned to it. Some of the games ended up on normal cartridge (*Ocarina Of Time*, *Hybrid Heaven*, *Paper Mario*, *Ogre Battle 64*), but the rest disappeared, including games such as *Cabbage*, *Jungle Emperor Leo* and *Dezaemon DD*, together with all add-on disks bar the *F-Zero* kit.

To date, only two other games are known to still have the 'hook' programming within their code to access the 64DD unit during play. *Ocarina Of Time* is the more well known, given hackers split the code apart and discovered when the game would have looked for new data from the 64DD. Thankfully, that project was one that was finally released in the form of the Master Quest on the first promotional *Zelda* Gamecube disc. The other is *Mario Party*, suggesting Hudson planned to release expansions on disk but they ended up as seperate cartridges instead.

The unit itself was made available from December 1999, although the actual online RANDnet service didn't begin until February 2000. Subscribers had the ability to order future software through the service, which was the only way to acquire it, chat to other users, swap scores, play demos and browse the internet. By the end of 2000, however, Nintendo cancelled the project, and in March 2001 the online service was stopped completely. In effect, the 64DD unit had a lifespan of only twelve months.

Discounting the RANDnet access disk itself, there were only nine pieces of software released for the unit in that year. For the most part they are not tricky to track down, although the last two programs, *Kyojin No Doshin: Kaihou Sensen Chibikko Chikko Daishuugou* and *Japan Pro Tour Golf 64* are hard to find by virtue of their lateness, the aforementioned online-only availability and a low print run (3,000) of each.

...AND THE REST



01. Keyboard

The keyboard was designed and supported only via the RANDnet service with the N64DD unit, allowing members to properly type emails and messages to other users without having to rely on a convoluted and frustrating on-screen input system. Ergonomically it looks much like a PC (rōmaji) keyboard but with added symbol functionality.

02. Rumble Pak

The Rumble Pak was bundled with *Starfox 64* (or *Lylat Wars* in Europe) and then sold separately a few months later. Arguably the inspiration for rumble being included inside controllers since, it was supported by a staggering amount of games, although only a few of them (such as *Ocarina Of Time*) actually used it for specific gameplay functionality.

03. Expansion Pak

Initially bundled with *Donkey Kong 64* (and, in Japan, *Majora's Mask* and *Perfect Dark*) along with the 64DD unit itself, the Expansion Pak increased the memory of the N64 from 4MB to 8MB. While the aforementioned three games were the only titles that required the extra memory to function, many other titles supported it to provide either higher resolutions or better quality textures.

04. Bio Sensor

The Bio Sensor was a Japan-only device designed to interact with *Tetris 64*, where one end plugged into the controller and the other clipped onto the player's ear. While the game delivered the expected *Tetris* experience, one mode sped up or slowed down the action based upon the player's heart rate. Limited for sure, but a curiosity nonetheless.

05. Hori controllers

While these Hori controllers are for the N64, it is curious to note they share a number of characteristics with the Gamecube controller. Released in 2000, evidently Hori must have been privy to some of Nintendo's upcoming design ideas and used them accordingly. Available in a range of colours, they are quite ergonomic and highly sought after.

06. Transfer Pak

The Transfer Pak plugged into the controller and enabled the N64 to transfer data between Game Boy cartridges and compatible N64 titles. While likely created for *Pokémon* players to transfer and compete using their Game Boy rosters in *Pokémon Stadium*, it was also useful for importing user created players into *Mario Golf* and *Mario Tennis*.

07. Import Adaptor

Due to the N64 having so many great games that weren't released on PAL, it makes sense to own an import adaptor. The Passport 3 Adaptor is one of the best due to its high compatability with so many essential games, but the one we've featured here is also worth considering.

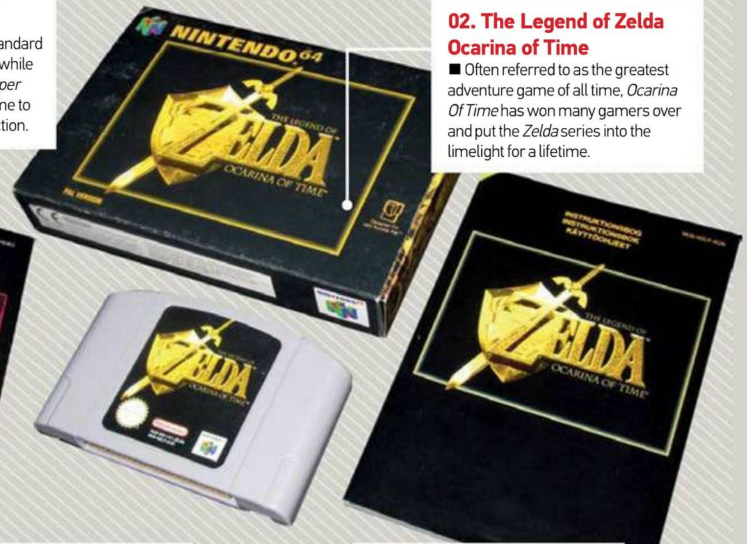
The Collector's Guide

TOP 5 GAMES TO PLAY



01. Super Mario 64

■ Setting the 3D platformer standard for many, many years to come while offering hours of gameplay, *Super Mario 64* should be the first game to arrive in any Nintendo 64 collection.



02. The Legend of Zelda Ocarina of Time

■ Often referred to as the greatest adventure game of all time, *Ocarina Of Time* has won many gamers over and put the *Zelda* series into the limelight for a lifetime.

03. GoldenEye 007

■ While it hasn't aged gracefully, Rare's first-person shooter *GoldenEye 007* holds many special memories for N64 gamers and has plenty to offer for newcomers.



04. Mario Kart 64

■ Picking up from where the Super Nintendo classic left off, *Mario Kart 64* is easily the best four-player party game around, offering hours of friendship-breaking gameplay.



05. Super Smash Bros.

■ Ever wondered who would win in a battle between Pikachu, Samus and Link? An amusing four-player brawler, *Super Smash Bros.* leaves no room for niceties between friends.



PLAY THESE NEXT



Banjo-Kazooie



International Superstar Soccer 98



Pilotwings 64



Blast Corps



F-Zero X



Conker's Bad Fur Day



Perfect Dark



Space Station Silicon Valley



Excitebike 64



Pokémon Snap

TOP 5 IMPORT GAMES



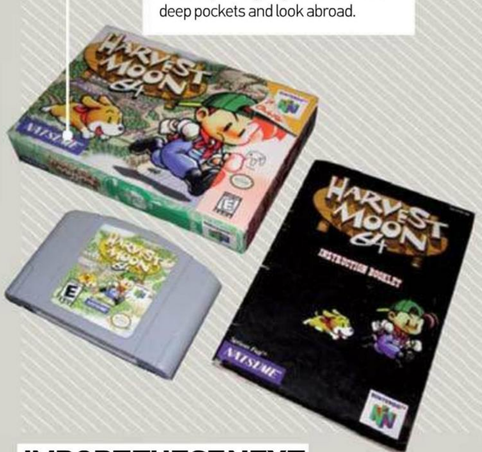
01. Susume! Taisen Puzzle Dama Toukon! Marumata Chou

■ Get ready for a Konami's quirky cross between *Puyo Puyo* and *Columns*. Match three or more to start chain combos in this great two-player puzzler. Highly recommended.



02. Ogre Battle 64: Person of Lordly Caliber

■ Although it has been available on the Virtual Console for some time, the original US version of this cult SRPG continues to climb in price.



03. Harvest Moon 64

■ The follow up to the popular SNES game never appeared in the UK, so if you want an English language version you're going to have to have deep pockets and look abroad.



04. Bakuretsu Muteki Bangai-O

■ One of Treasure's finest on the system is also one of the most expensive. This addictive shooter will set you back a fair amount if found in good condition.



05. Tsumi to Batsu - Hoshi no Keishousha (Sin & Punishment)

■ The cream of the crop and easily the most desirable title from the import Nintendo 64 library. On-rails shooter *Sin & Punishment* is a genuine treasure worthy of a space in any games collection.

IMPORT THESE NEXT



Nightmare Creatures



Asteroids Hyper 64



Fighter Destiny 2



Razor Freestyle Scooter



Star Soldier: Vanishing Earth



PD Ultraman Battle Collection 64



Dance Dance Revolution Disney Dancing Museum



Dobutsu No Mori



Neon Genesis Evangelion



Goemon: Mononoke Sugoroku

The Collector's Guide

TOP 5 RAREST PAL GAMES



01. Airboarder 64
■ Attempting to muscle in on Tony Hawk's territory, *Airboarder 64* is a mediocre futuristic boarding game with little to offer other than its impressive rarity.

02. Hercules: The Legendary Journeys*
■ This lackluster attempt to steal *Zelda*'s spotlight went pretty much unnoticed, as Titus' adventure game *Hercules* is nothing but an unplayable mess. Sadly, what doesn't sell well becomes rare.

03. Major League Baseball Featuring Ken Griffey Jr*
■ To the majority of European audiences, Baseball is an American sport. The Australians, however, would disagree, as would their PAL-exclusive Baseball release for the Nintendo 64.

04. Snowboard Kids 2*
■ Regardless of the popularity of the first *Snowboard Kids* game, the sequel remains almost unheard of, and in terms of PAL regions exclusively released in Australia.

05. Starcraft 64*
■ *Starcraft* made its way onto the N64 in 2000, but remained exclusive to Australia and North America. Its rarity and very high price tag will no doubt send you looking for the PC version instead.

GET THESE NEXT



Aidyn Chronicles: The First Mage



Gex 3: Deep Cover Gecko



Knockout Kings 2000



Off Road Challenge



AeroFighters Assault



Rocket - Robot On Wheels



Blues Brothers 2000



BattleTanx: Global Assault



Mortal Kombat Mythologies: Sub Zero



HSV Adventure Racing

* These US versions are easier and cheaper to secure than their Pal counterparts



THE JEWEL IN THE CROWN

Every system has a game that all collectors would love to own no matter its cost. For N64 owners it's the lavish Majora's Mask Limited Edition Adventure Set





The Watch

■ Considering that *The Legend Of Zelda: Majora's Mask* deals with time travel, it should come as no surprise to learn that a watch was included with this limited edition pack. The watch was only released with the box set, so just 1,000 exist.



The CD

■ The music of *Majora's Mask* is incredibly ambitious in scope – so much, in fact, that it needed to be crammed onto two CDs. Although it contains no additional tracks, it does feature a totally different cover to the commercial release.



The T-Shirt

■ A high-quality T-Shirt finishes off the Limited Edition Adventure Set. Featuring the logo that adorns the original box, it's a fitting addition to the box set and rounds off an impressive package. Just be aware that it's only available in size Large.

Special thanks to Janne Kaitila for giving us access to his collection and to Jan Baart, Lasse Erkola and the members of NTSC-UK.com and 64dd.net

THE COMPLETE CHECK LIST OF PAL N64 GAMES*

VERY RARE

- Aidyn Chronicles: The First Mage ☐
- Airboarder 64 ☐
- BattleTanx: Global Assault ☐
- Fighting Force 64 ☐
- Gex 3: Deep Cover Gecko ☐
- Hercules: The Legendary Journeys ☐
- Knockout Kings 2000 ☐
- Madden NFL 99 ☐
- Major League Baseball Featuring Ken Griffey Jr ☐
- Mortal Kombat Mythologies: Sub-Zero ☐
- NBA Pro 99 ☐
- NFL Quarterback Club 2000 ☐
- Off Road Challenge ☐
- Resident Evil 2 ☐
- Rocket: Robot On Wheels ☐
- San Francisco Rush 2049 ☐
- Snowboard Kids 2 ☐
- Starcraft 64 ☐
- Top Gear: Hyper Bike ☐

RARE

- Aerofighters Assault ☐
- Blues Brothers 2000 ☐
- Centre Court Tennis ☐
- Chameleon Twist 2 ☐
- Charlie Blast's Territory ☐
- Conker's Bad Fur Day ☐
- Destruction Derby 64 ☐
- F1 Racing Championship ☐
- Flying Dragon ☐
- Gauntlet Legends ☐
- Hexen ☐
- Hydro Thunder ☐
- International Superstar Soccer 2000 ☐
- Kirby 64: The Crystal Shards ☐
- Milo's Astro Lanes ☐
- Mortal Kombat Trilogy ☐



RakugaKids

- Mystical Ninja 2 starring Goemon ☐
- NBA in the Zone 2000 ☐
- NBA Jam 99 ☐
- NBA Jam 2000 ☐
- NBA Live 99 ☐
- NBA Live 2000 ☐
- NBA Pro 98 ☐
- NFL Quarterback Club 99 ☐
- NHL 99 ☐
- NHL Breakaway 98 ☐
- NHL Breakaway 99 ☐
- NHL Pro 99 ☐
- Nuclear Strike 64 ☐
- Olympic Hockey 98 ☐
- Penny Racers ☐
- PGA European Tour ☐
- Power Rangers (Saban's): Lightspeed Rescue ☐
- Racing Simulation 2 ☐
- RakugaKids ☐
- Rampage 2: Universal Tour ☐
- Rat Attack ☐
- Roadsters ☐
- Robotron 64 ☐
- Rush 2: Extreme Racing USA ☐
- Shadowgate 64: Trials Of The Four Towers ☐
- Spacestation Silicon Valley ☐
- Tarzan (Disney's) ☐
- Top Gear Rally 2 ☐
- Tony Hawk's Pro Skater 2 ☐
- Tony Hawk's Skateboarding ☐
- Toy Story 2: Buzz Lightyear to the Rescue! ☐
- Vigilante 8 ☐
- War Gods ☐
- WCW Mayhem ☐

UNCOMMON

- Aero Guage ☐
- All Star Tennis '99 ☐
- All-Star Baseball 99 ☐
- All-Star Baseball 2000 ☐
- Army Men: Sarge's Heroes ☐
- Banjo-Tooie ☐
- Bass Hunter 64 ☐
- Batman Of The Future: Return Of The Joker ☐
- Bio F.R.E.A.K.S. ☐
- Castlevania: Legacy Of Darkness ☐
- Chameleon Twist ☐
- Chopper Attack ☐
- CyberTiger ☐
- Daffy Duck Starring As Duck Dodgers ☐
- Daikatana ☐
- Dark Rift ☐
- Donald Duck Quack Attack (Disney's) ☐
- Doom 64 ☐
- Dual Heroes ☐
- Duke Nukem 64 ☐
- Duke Nukem Zero Hour ☐
- Extreme-G XG2 ☐
- G.A.S.P!!: Fighters Nextreme ☐
- Gex 64: Enter the Gecko ☐
- Holy Magic Century ☐
- Hot Wheels: Turbo Racing ☐
- Iggy's Reckin' Balls ☐
- Killer Instinct Gold ☐
- Knife Edge ☐
- Lode Runner 3-D ☐



Quake

- Mace: The Dark Age ☐
- Madden Football 64 ☐
- Mario Party 3 ☐
- Monster Track Madness 64 ☐
- Mortal Kombat 4 ☐
- Mystical Ninja Starring Goemon ☐
- NBA Hang Time ☐
- New Tetris, The ☐
- NFL Quarterback Club 98 ☐
- Operation Winback ☐
- Paper Mario ☐
- Paperboy ☐
- Pokémon Stadium 2 ☐
- Premier Manager 64 ☐
- Quake ☐
- Quake II ☐
- Rainbow Six (Tom Clancy's) ☐
- Rampage: World Tour ☐
- Re-Volt ☐
- Ready 2 Rumble Boxing ☐
- Road Rash 64 ☐
- Rugrats In Paris: The Movie ☐
- S.C.A.R.S. ☐
- San Francisco Rush: Extreme Racing ☐
- Scooby Doo!: Classic Creep Capers ☐
- Snowboard Kids ☐
- South Park: Chef's Luv Shack ☐
- South Park Rally ☐
- Starshot: Space Circus Fever ☐
- Supercross 2000 ☐
- Superman ☐
- Taz Express ☐
- Tigger's Honey Hunt ☐
- Tom And Jerry In Fists Of Fury ☐
- Tonic Trouble ☐
- Top Gear: Overdrive ☐
- Turok 3: Shadow Of Oblivion ☐
- Turok: Rage Wars ☐
- Twisted Edge Snowboarding ☐
- Vigilante 8: 2nd Offence ☐
- Virtual Chess 64 ☐
- Virtual Pool 64 ☐
- Wayne Gretzky's 3D Hockey ☐
- Wayne Gretzky's 3D Hockey '98 ☐
- WCW/NWO: Revenge ☐
- WCW/NWO: World Tour ☐

EXTREMELY RARE	VERY RARE	RARE	UNCOMMON	COMMON	VERY COMMON
Games that have less than a few dozen known copies available.	Very hard to come by. Expect to see only a couple of copies per year.	You should be able to source these in a reasonable amount of time.	You won't find them straight away, but you will after a search.	Always just a click away for the average collector.	So common you'll find them in any bundle of games you buy

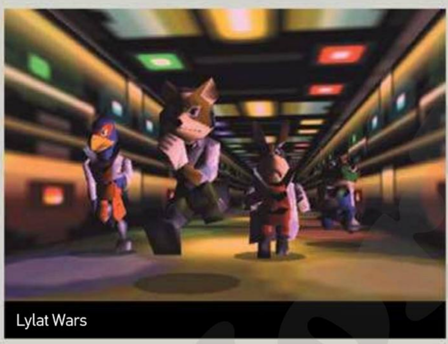
- Wetrix ☐
- World Driver Championship ☐
- World League Soccer 2000 ☐
- Worms Armageddon ☐
- WWF Wrestlemania 2000 ☐
- Xena: Warrior Princess ☐

COMMON

- 007: The World Is Not Enough ☐
- Armorines: Project S.W.A.R.M. ☐
- Automobili Lamborghini ☐
- Beetle Adventure Racing! ☐
- Blast Corps ☐
- Body Harvest ☐
- Bomberman 64 ☐
- Bomberman Hero ☐
- Buck Bumble ☐
- Bug's Life, A ☐
- Bust-A-Move 2: Arcade Edition ☐
- Bust-A-Move 3 DX ☐
- Carmageddon 64 ☐
- Castlevania ☐
- Clayfighter 63 1/3 ☐
- Command & Conquer ☐
- Cruis'n USA ☐
- Cruis'n World ☐
- Donkey Kong 64 ☐
- Earthworm Jim 3D ☐
- ECW: Hardcore Revolution ☐
- F1 World Grand Prix ☐
- F1 World Grand Prix II ☐
- Fighters Destiny ☐
- Forsaken ☐
- Glover ☐
- Hybrid Heaven ☐
- International Track & Field: Summer Games ☐
- Jeremy McGrath Supercross 2000 ☐
- Jet Force Gemini ☐
- Kobe Bryant in NBA Courtside ☐
- The Legend Of Zelda: Majora's Mask ☐
- LEGO Racers ☐
- Magical Tetris Challenge ☐
- Mario Golf ☐
- Mario Party 2 ☐
- Mickey's Speedway USA ☐
- Micro Machines 64 Turbo ☐
- Mischief Makers ☐
- Multi Racing Championship ☐
- Nagano Winter Olympics '98 ☐
- NASCAR 99 ☐
- Perfect Dark ☐
- Pokémon Puzzle League ☐
- Pokémon Snap ☐
- Rayman 2: The Great Escape ☐
- Ridge Racer 64 ☐
- Rugrats: Treasure Hunt ☐
- Shadow Man ☐
- South Park ☐
- Star Wars: Episode 1: Battle for Naboo ☐
- Star Wars: Episode 1: Racer ☐
- Star Wars: Shadows Of The Empire ☐
- Super Smash Bros. ☐
- Tetrisphere ☐
- Top Gear Rally ☐
- Turok: Dinosaur Hunter ☐
- Waialae Country Club: True Golf Classics ☐
- WipEout 64 ☐
- WWF Attitude: Get It! ☐
- WWF No Mercy ☐
- WWF War Zone ☐
- Yoshi's Story ☐

VERY COMMON

- 1080° Snowboarding ☐
- Banjo-Kazooie ☐
- Diddy Kong Racing ☐
- Excitebike 64 ☐
- Extreme-G ☐
- F-Zero X ☐
- F1 Pole Position 64 ☐
- FIFA 64 ☐
- FIFA 99 ☐
- FIFA: Road to World Cup 98 ☐
- GoldenEye 007 ☐
- GT 64: Championship Edition ☐
- International Superstar Soccer 64 ☐
- International Superstar Soccer 98 ☐
- The Legend Of Zelda: Ocarina Of Time ☐
- Lylat Wars ☐
- Mario kart 64 ☐
- Mario Party ☐
- Mario Tennis ☐
- Mission: Impossible ☐
- Pilotwings 64 ☐
- Pokémon Stadium ☐
- Star Wars: Rogue Squadron ☐
- Super Mario 64 ☐
- Turok 2: Seeds Of Evil ☐
- V-Rally: Edition 99 ☐
- Wave Race 64 ☐
- World Cup 98 ☐



Lylat Wars

Collector Q&A

Finnish games journalist Janne Kaitila explains the ins and outs of N64 collecting



So what drew you to collecting on the N64?
I wanted to start collecting all the games for a specific platform and the N64 seemed like a natural choice. It's old enough to be called retro, but new enough that finding CIB games is not overwhelming. Also, the library is only 400-odd strong.

How long has your collection taken?
The 'serious' collecting concerning the N64 started maybe five years ago.

What advice would you give to other readers interested in collecting N64 games?
As with all cartridge games, think whether or not you are going to start collecting loose or CIB games.

How hard is it tracking down CIB editions?
The cardboard boxes are a challenge. Many loose carts exist simply because people threw out the boxes, which isn't something that happens with plastic cases. Finding that mint box you've been searching for is a very rewarding thing.

Which item couldn't you live without and why?
The 64DD add-on. It was a miracle it was even released, but it was, and the end result is a fascinating piece of history, not to mention one of the most collectable.

What's the trickiest game you've had to source?
By far the most elusive game on the N64 is a CIB copy of *Clayfighter: Sculptor's Cut*. Released in the USA as a rental-only, loose carts are easy enough to find. However, the box is extremely rare, and the manual near-fabled. It's the only game that I don't own in CIB condition, as my cart and box are still waiting for a manual. A loose cart goes for 40 dollars, whereas a CIB game could be ten times more. That's quite a price on paper and card.

What is the most you've ever spent on a game?
That would be for one of my most prized possessions: *The Legend Of Zelda: Majora's Mask Limited Edition Adventure Set*. Released in Europe as a promotional item, I have one of the 1,000 produced. I paid €500 for it, but it was an easy purchase for me.

What are you still missing?
In addition to two 64DD games, I'm missing four japanese exclusives for the N64: *Choukuukan Night Pro Yakyuu King 2, Kira To Kaiketsu! 64 Tanteidan, Nushi Tsuri 64: Shiokaze Ninotte* and *Puyo Puyo Party*.



* Rarity guide courtesy of RetroCollect. Head to www.retrocollect.co.uk for more information

THE CLASSIC GAME

FIENDISH FREDDY'S



Apparently there's nothing more distressing than seeing a clown bawling their eyes out. Not only is this a waste of perfectly good face paint, but for every teardrop they shed somewhere a fairy is said to lose a front tooth. So there's plenty resting on the player in *Fiendish Freddy's Big Top O' Fun*, which tasked them with putting on the greatest show on earth to earn the $10,000 owed to their 'Big Greedy Bank' and thus save the circus and the smiles of hundreds of winged pixies. If all that wasn't stressful enough the cynical lender has only gone and hired a lunatic named Fiendish Freddy to sabotage the show. Stuart Hunt discovers why Gray Matter's *Fiendish Freddy* was certainly a laughing matter.



JUGGLING

Help Jeffy Joe juggle power tools, knives, bowling balls, and even babies as they are tossed at him by his faithful sea lion assistant. Watch out for Freddy, though, who will distract your noisy helper to throw bombs and even missiles into the ring.



DIVING

Assuming the role of Horace the diver, players must leap from the high board pull a series of poses and land into containers of water that get increasingly smaller. Be mindful of Freddy, though, who will appear with a fan to blow you off course.



KNIFE THROWING

Here you must pop all of the balloons surrounding Knancy Knife. Obstructing your deadly plight is Freddy who will appear and lob smoke bombs into your path, making it impossible to see what you're aiming at.



TRAPEZE

Finola is high up in the rafters, and you have to help her swing from pillar to post (well, bar to bar) without falling through some skilled timing. Dawdle too long on one bar, though, and Freddy will appear armed with jetpack and scissors to cut the rope.



TIGHTROPE

Help Tony Tiptoe tippy toe across the high wire by helping him to centre his balance. Here, Freddy launches himself at Tony to try to knock him off balance, and in later levels will try to slice Tony in half using a circular saw. Slightly extreme, we thinks.



HUMAN CANNONBALL

The grand finale: the Human Cannonball. By taking into account the amount of gunpowder that has been packed into the cannon you must help Fernando hit his target. Take too long and Freddy will show up to sabotage the big finish.

WHY IS IT A CLASSIC? PT 1



The greatest show on earth (apparently)

Aside from its wonderful cartoon graphics and sounds, what makes *Fiendish Freddy* a classic game is the variety of mini-games on offer, each covering acts you would expect to see at a circus. From power tool juggling to Diving, it was all there – apart from that one act where a woman wearing a suit of armour uses a tile cutter to create sparks. While Fiendish Freddy wasn't the first game to stumble on the idea of basing games on a circus scenario it is arguably the best in show, taking the template of games like Track & Field but applying a dollop of variety and humour to deliver something that felt really original.

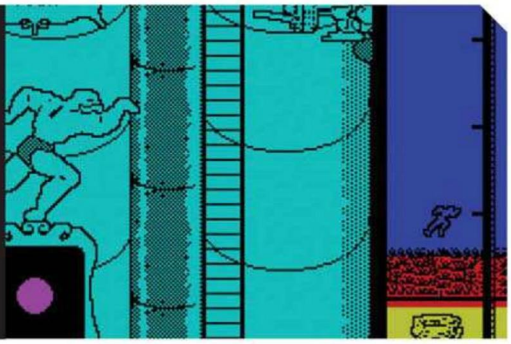
BEST CHARACTER



The clown with mad beef

Fiendish Freddy refers to the game's antagonist, Freddy: a crazed clown hired by the bank to sabotage the show. Freddy appears in a variety of ways to distract the player. In the first event, Diving, he appears holding a giant fan to blow the player off course during their fall, and in the Trapeze event he's strapped to a jetpack and will brazenly cut the rope to send your poor performer to a painful death, despite a number of witnesses. In another particularly gruesome encounter he can be seen trying to slice a tightrope walker clean in half with a circular saw – proof just how fiendish Freddy really is.

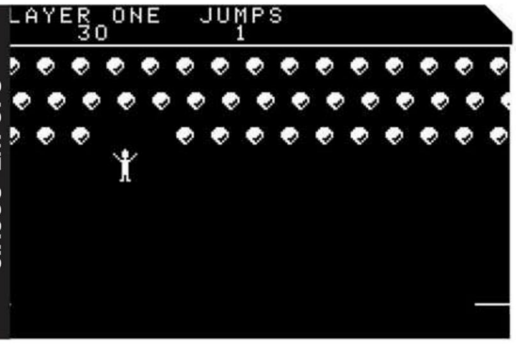
BEST PERFORMANCE



Dive, dive, dive!

Hmm… a tricky one, as all the events are enjoyable and your favourite will likely just come down to whatever mood you happen to be in. If you're in a knife-flinging mood then might like the Knife Throw, which is bloody tricky so you probably won't, to be honest. If you're a sucker for games that you can finish without much hair pulling then Tightrope is perfect for you. If we were offered front row seats for one act, though, it would have to be Diving. Getting to jump into increasingly small targets (beginning with a bath and moving on to a bucket, a brick (?) and a cup) is as entertaining as it sounds.

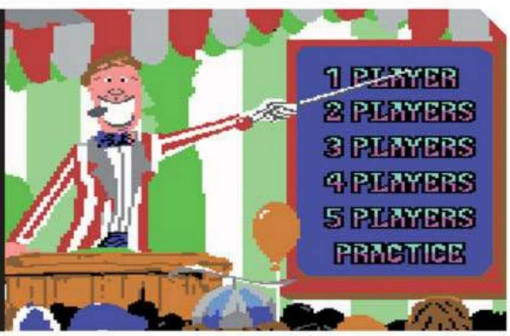
CIRCUS-'EM-UPS



More circus games you may wish to try

Fiendish Freddy wasn't the first game to be based on the circus. Oh no, a few games beat Gray Matter to the punch. The first was probably *Circus* by Exidy. Released in 1977, this *Breakout*-style game saw players launch a clown up the screen to pop balloons using a see-saw. Konami also released *Circus Charlie* in 1984, which saw players steer its titular clown through six events including Tightrope Walking and Trapeze, as well as the popular 'Riding A Lion Through A Series Of Fire Hoops While Also Avoiding Blazing Pots'. Oh yeah, and lest we forget the dismal *Circus Games* – a more serious take on circus simulation by Tynesoft.

WHY IS IT A CLASSIC? PT 2



Party on your C64

If there's a game that should be remade for the Wii, and is perfectly suited to the family bonding fodder that seems to make up the majority of the console's releases, it has to be *Fiendish Freddy*. It's the perfect party game of the 8-bit era, as it allows up to five players to take turns in getting the best score. So the next time one of your kids accidentally drops a mountain bike on the Wii, fret not. Simply hook up your old computer, boot up *Fiendish Freddy* and watch their faces light up and then promptly look confused when they realise that waving the keyboard in the air is doing little to boost their score.

BEST ELEMENT



Funny games

One aspect that most gamers remember about *Fiendish Freddy* is its humour. It's certainly a game that doesn't take itself too seriously; it's littered with plenty of laugh out loud moments. As well as the game's funny intro, which shows the circus owner being handed his loan settlement writ by his bank, there's the funny and often violent death animations of the artistes too, and the weird ways that Freddy tries to disrupt their performances. And lest we forget the comical antics of the games panel of judges, who spend most of their time trying to beat, hurt and strangulate one another.

What the press said… ages ago



CRASH 94%

This is amazing. I could not believe my eyes when I first played *Fiendish Freddy's Big Top O' Fun*! You could just as easily be watching a cartoon on the telly instead of playing on your Spectrum!

Zzap!64

The game's strongest point is undoubtedly its wicked sense of humour, which makes even losing very amusing.

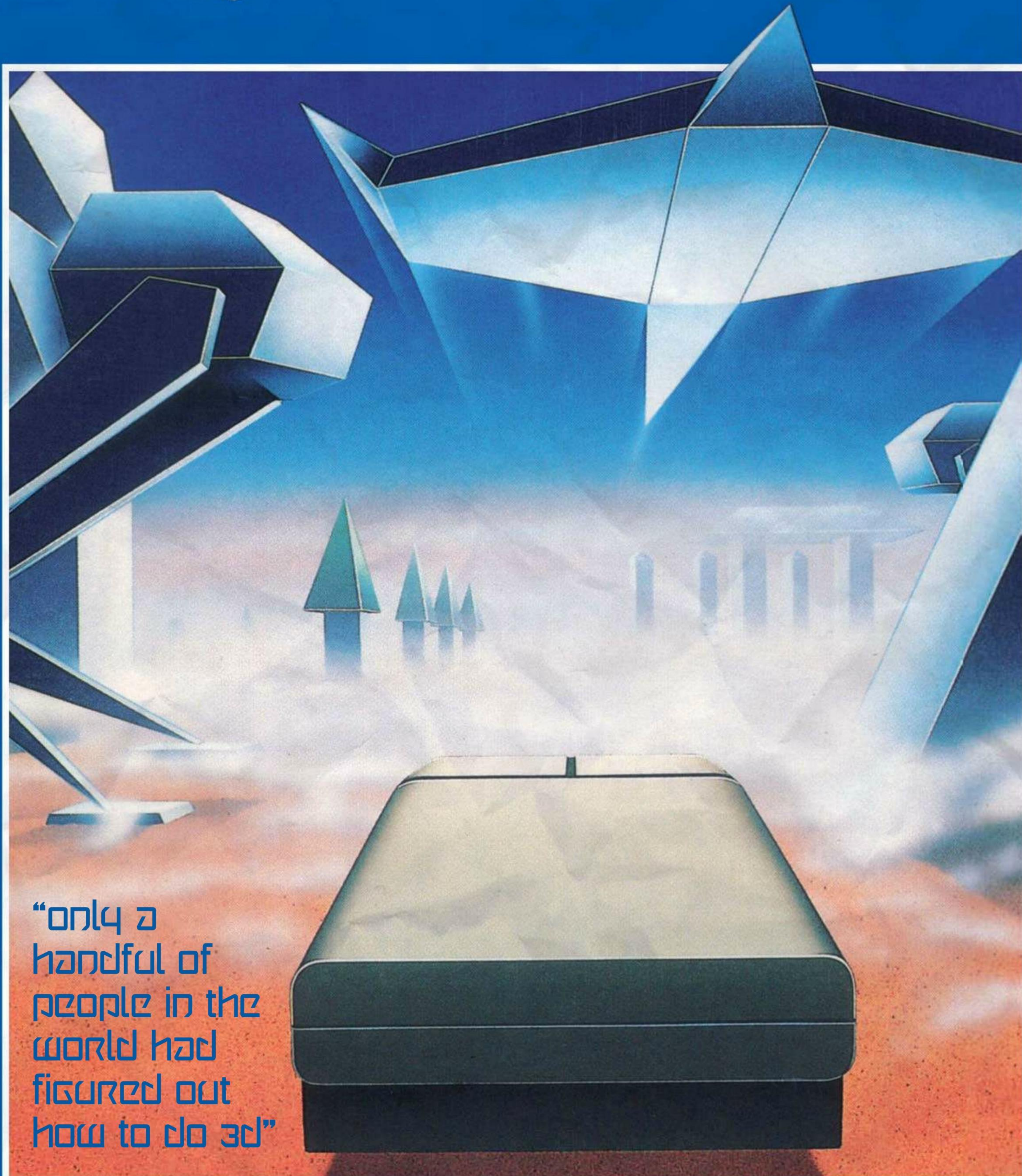
What we think

Both comments echo our feelings of *Fiendish Freddy*. The game does feel like you're playing an interactive cartoon and the humour is definitely where a lot of the game's charm is found. It kind of like *Daley Thompson's Decathlon* meets an episode of *The Simpsons* - the one were Homer enrols to Clown College.



IN THE KNOW

- **PLATFORM:** SPECTRUM, AMIGA, C64, ST, PC, CPC
- **PUBLISHER:** MINDSCAPE
- **DEVELOPER:** GRAY MATTER
- **RELEASED:** 1989
- **GENRE:** SPORTS
- **EXPECT TO PAY:** A FEW QUID



"only a handful of people in the world had figured out how to do 3d"



STARGLIDER

Borne of a love of the Star Wars cab, Starglider wowed on its arrival with stunning presentation and immersive environments. Andy Smith talks to creator Jez San and project manager Gary Sheinwald about organic game development, the rewards of success, and getting the OBE

"My father was exporting people's personal effects when they emigrated," says Jez San of his importer/exporter father. "It came in handy, because in 1978, when I was 12 and a half, he imported one of the first computers available, a Radio Shack TRS-80 Model I Level II. After playing all the games I could find on it, I got frustrated and learned to program so I could try and make my own. Then the BBC computer came out in 1981 and I was hooked. Finally, I had colour and multi-channel sound – the essential elements of a computer game – and having the built-in assembler was the most amazing idea."

You may well have heard of Jez San. Since the age of 16, when he set up Argonaut Software, he has been deeply involved in the industry, first developing games; then hardware, even working with Nintendo to develop the Super Famicom's Super FX chip; and more recently online gaming and mobile applications. Oh, and he was awarded an OBE, too.

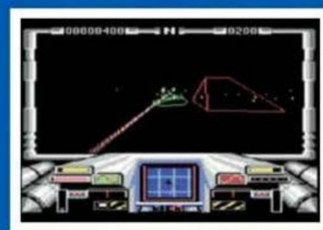
After first writing two books about the Sinclair QL, Jez began working on 1984's side-scrolling shooter *Skyline Attack* for the Commodore 64, and then something caught his eye in the arcade. It was a cabinet that threw vectors around the screen like they would one day be superseded, and had *that* theme tune: the *Star Wars* cabinet.



» [Atari ST] Take a hit and this is what happens. It's a very clear way of saying 'Best not do that again!'



» [Atari ST] According to this computer screen, enemy fleet commander Herman Krudd is aboard this ship. Take it down quick!



» [C64] The C64 version was less well received than other conversions. Jez feels that this may have been down to the fact that the machine was underpowered.

"I loved it so much I tried to buy the home computer rights from Atari," says Jez. "They were playing ball, so I started development of my own version, and then all of a sudden they said they weren't interested. So I detoured my game and made it more original, inspired by, rather than based on, the *Star Wars* coin-op."

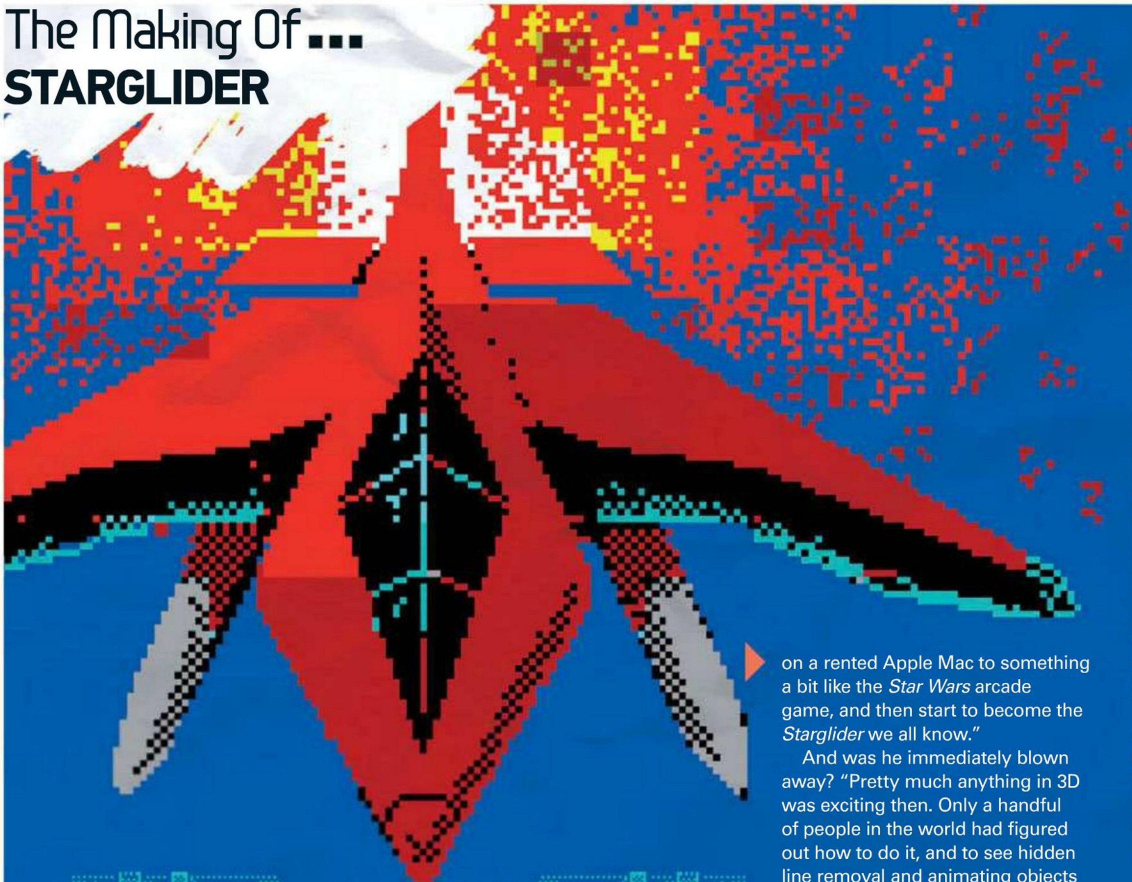
And that, folks, was the genesis of something very special indeed.

"I was talking with Amiga in 1984 and was negotiating to get one of their prototype models, codenamed the Lorraine. Then Commodore bought them and everything changed, so I bought a classic Mac and started work on my 3D technology, and *Starglider* was born. When the Atari ST and Commodore Amiga machines finally came out, I ported to them from the Mac."

The Mac version was later dropped as Jez didn't feel the system was really a home machine at the time. "It was many years," he remembers, "before a Mac version came back." What with all these trials and tribulations, the game would be in development for three years.

Project manager Gary Sheinwald remembers how his own involvement with the game began: "Although *Starglider* was under way when I joined [*Starglider* publisher] Rainbird in May 1986, I'd known Jez for about four years by then, and had seen *Starglider* evolve from a rotating cube

STARGLIDER



on a rented Apple Mac to something a bit like the *Star Wars* arcade game, and then start to become the *Starglider* we all know."

And was he immediately blown away? "Pretty much anything in 3D was exciting then. Only a handful of people in the world had figured out how to do it, and to see hidden line removal and animating objects – remember that games such as *Battlezone* didn't have any significant animation; *Starglider* had bird-like craft with flapping wings – was very impressive at the time."

So no, it was no longer a *Star Wars* game. There were no Jedi involved and very little heavy breathing, but *Starglider* was a revelation in its own right – crisp vectors, a free-roaming 3D world, and smooth gameplay that mixed the best of the blaster and flight sim genres. Impossible as it may seem now, in this time of big development teams and even bigger budgets, *Starglider* 'evolved', as Jez explains: "The game had an initial design and several of the elements were there, as well as a whole lot of stuff that didn't work in reality. The game mostly evolved from the loose spec. I just wanted to make the best game I could in the time available."

And feedback was, of course, important. "Jez was very open to feedback, especially on gameplay difficultly ramping, damage values, scoring, etc," Gary remembers. "I designed all the level maps on graph paper and typed in all the values for everything such as hit points, scores, damage, refuelling/recharging rates and so on. Gameplay developed as we went along. If I wanted something changed and Jez agreed, he'd make a code change, or I would make a data change directly myself. These days it'd be rounds of focus group testing and QA department input. None of that existed then. I did 99 per cent of the QA – there was no testing department and no external testing. Everything was very organic, and also quite informal. Back then there were no rigid production processes like we have today."

"I'm one of those coders that likes to informally think about how things are to work and then tries it out," Jez continues. "Then tweaks and retries. The continual tuning led me to eventually make my own assembler program called ArgAsm to reduce the turnaround time between tweaking and testing a game. I also, jointly with Foo Katan, developed the first PDS, the Programmers Development System. It was used by David Braben and Ian Bell on porting *Elite* from the BBC to the C64, and it's what got me my first break with Rainbird. I agreed to help them port *Elite*, if they agreed to give me my own game deal – *Starglider*."

And so *Starglider*, along with text adventure *The Pawn*, became the launch title for Rainbird's line of

the egrons strike back

"FOR THE SEQUEL, Argonaut had grown from a one-man operation to a team of about seven and there was more input from the whole team," Gary says. "The big change was going from a game set on one planet to having interplanetary gameplay and everything that it entailed technically and creatively."

Starglider 2 was not just more of the same. Gone were the 3D wireframe graphics and in came a solid 3D graphics engine that was jaw-dropping at the time. Critics raved about it, *The Games Machine* dubbing it "the most enjoyable game of the year", and sales were superb. And if the original *Starglider* was a love letter to *Star Wars*, the sequel was a steamy letter in a gentlemen's magazine to *Return Of The Jedi*. This time around the player was tasked with collecting the workings of a bomb with which to destroy an evil space station that was being constructed as you played, before it became fully operational and started blowing up planets. Sound familiar?

Even with the inevitably high expectations, the game still grew organically, as the original had done. "It was just a lot of 'Wouldn't it be great if we could do so-and-so?' and then the team would just go and try to do it," Gary says. "I don't recall any upper management interference or input that put any undue pressure on the team to meet expectations. The hype didn't affect me whatsoever and I don't think it affected the team either. Things were different back then! I don't remember worrying about meeting expectations."

The game came packaged with a novella as before, but this time there was a little bit of extra fun to be had too: Painting With Rolf. "That came about because of a bug in the game at one point," explains Gary. "Rick Clucas of Argonaut showed it to me at their offices one day and I said that it was cool and they should leave it in as a feature, so they adapted the Object Viewer to make it into a simple 'painting' thing. 'Rolf' refers to Rolf Harris."

Starglider 2 was not without its issues, though. As you neared them, objects would sometimes break apart into their component parts; some felt that the game's more open-ended gameplay was confusing and offered no clear direction; and in an ostensibly canny move to save costs on packaging and production, the game was released for the Amiga and Atari ST on one disk using the ADLS (Argonaut Dual Loading System). The system would mean that the game could load up on either system. However, it proved unreliable and *Starglider 2* was the last time the innovation was used.

A second sequel was rumoured to be in early development, with some designs put together and basic environments programmed, but the game sadly failed to materialise.



» [CPC] That there may look like a Starglider but is, in actual fact, a cunningly disguised Egron up to no good. Get blasting!

» [CPC] You can dock in these handy stations to have your shields repaired and your stock of missiles topped up. You can also interrogate the computer system to learn more about the enemy.



"effectively my parents financed the game because I was living at home for free"

games for the Atari ST and Amiga, and the technical prowess on display in the game assured its success. As did its innovation…

Long before *MechWarrior*, *Starglider* had a neat little idea to do with firing missiles: you fire it and then switch to that missile's POV, guiding it to its demise – and, hopefully, one of the enemies' as well. "I loved the idea of changing the 3D viewpoint," Jez remembers. "That sounded exciting to me, but then I wanted you to be able to control it and see where it went, to guide it. Nowadays, I guess we call them RPVs in the military and 'after touch' in games, but back then it was sort of novel."

Groundbreaking as it was, the production of *Starglider* was not without its trials, especially for a bedroom coder. Sort of…

"I did have an office at home, so I wasn't technically in the bedroom," explains Jez, "but it was certainly a home project, so effectively my parents financed it because I was living at home for free. *Starglider* took from 1984 to 1986." No dev kits back then, though. "There were many challenges, like inventing the 3D system, and on the Atari ST *Starglider* was the first game to use sampled sound. I was sat with my ST open, measuring voltages off the sound chip, and modulating the volume controls in real-time on the three channels to find what voltages came out so that I could play samples. I hired a Roland Juno synth to sample the song, and the title music by Dave Lowe let the *Starglider* theme sing out and was much appreciated at the time. He has since moved on to make TV themes like *Grand Designs*."

Producing the game was becoming a mammoth task, and was certainly a labour of love for more than just one man. "Although it was a bedroom-developed game, we shouldn't forget that even then plenty of other people contributed to the final product," Gary says. "Paul Hibbard did all the 3D models on graph paper; I was the poor bastard who had to type in all the co-ordinates for every point and every frame of animation by hand; Clare Edgeley was the voice of the ship computer; Rick Clucas coded some of the low-level system stuff like mouse input/output; and Jez's mum, Zoe, brought up tea and biscuits throughout the day and night during the final days of sleepless development. I don't think the game would have been released on time without her…"

"I farmed out the bits I didn't have the time or skill to do," Jez recalls. "So I could focus on the gameplay."

Coding back then was a hardcore thing, not for the faint-hearted. The good old days, when coders were inventive and computers were stubborn in their limitations, are something that Jez fondly remembers: "You took control of the machine and hit the pedal to the metal. You programmed in assembly or machine language, and you accessed the hardware directly to make it 'sing' in ways it was never designed to. Nowadays, you don't talk to the hardware directly; you use libraries and APIs. All the hard stuff is done for you and all you do is tell it what you want it to do, rather than help it do it, like we used to do. And gone is assembly language. Nowadays people program in C or even higher-level languages where they have little control over what is happening on the actual microprocessor at a register level.

Argonaut takes on BT

"MY ANCIENT HISTORY is that at 16 years old, in 1982, I had a summer job at Silversoft working alongside my school friend Foo [Fouad Katan]," Jez recalls. It may have been a great way to cut his teeth, but the young Jez was soon yearning for new challenges and was hard at work setting up Argonaut. And to get his first business deal secured, Jez had to get a little inventive.

BT had launched its Telecom Gold service, an early email-type system, and Jez had his sights on it. He set about hacking into the system in order to discover flaws in its security, and then produced a report, which he offered for sale to BT. Keen to plug up the holes in its defences, BT took the bait and Argonaut paid its first cheque into the bank.

Back then, I used to program very efficiently. I knew at any point what was in all of the registers so I didn't need to push and pop things onto the stack. This made the code run much, much faster than if someone had written it the normal way, and also no compiler at the time could create code like that. Probably even to this day, a compiler couldn't beat that style of programming."

But for those on the joystick end of things, *Starglider* remains a vivid memory because of just how immersive it was. It was the sandbox game of its day. And just like it sometimes seems that we can never quite recapture the spirit of those days, so too have other aspects of games changed – we all remember that buzz from a new, innovative release, but we should not forget the joys to be beholden even before that. We are talking, of course, about the packaging. Environmentally friendly

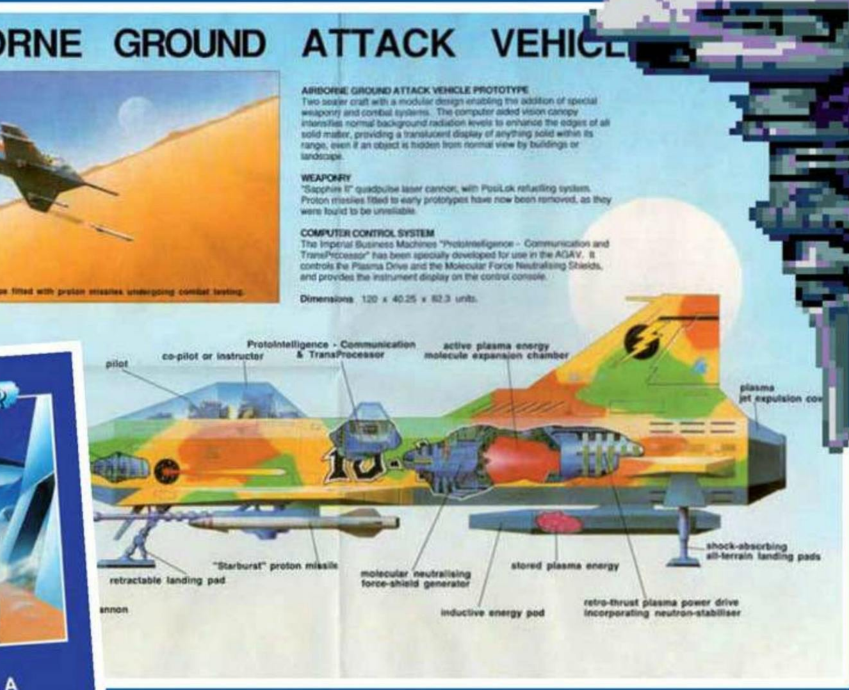


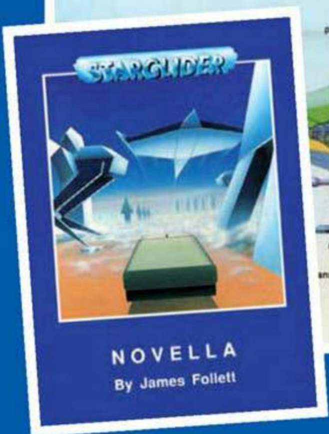
» [Apple II] The attract mode, looking not so attractive.



STARGLIDER







» **[Above]** This is your craft, the AGAV (Airborne Ground Attack Vehicle), a mean piece of kit fitted with Sapphire II quad pulse laser cannons. Bad news for those pesky Egrons. **[Left]** *Starglider* came packaged with an excellent novella by James Follett, which helped Jez San to shape the world and history within which the game was set.

Get Fresh

BROADCAST FROM A fictional space ship, the Millennium Dustbin, that travelled to a different location across the country each week, and presented by Gaz Top when he was still spiky, Charlotte Hindle, and mucus-dribbling puppet Gilbert the alien, ITV's *Get Fresh* featured the usual competitions and cartoons, but also a certain space-themed blaster.

"To be honest," Jez says, "I've no idea how it came about. I assume it was the awfully good chaps at Rainbird marketing who did that deal."

A specially modified version of *Starglider* was used as a regular feature, with contestants playing three-minute rounds. "They told me what to change and I made them a special version of the game. My friend Gary Sheinwald, who was my producer at Rainbird, spent every Saturday morning helping them get it going and sort it out so there were no problems. It was awesome that I could watch it every Saturday morning."

> "others were buying cars and houses, whereas my cash was making better games"

they perhaps weren't, but who can forget that feeling of holding one of those huge boxes and letting the bottom half slide out? And how much sweeter was it when you found more than just a disk or two in there? Well, *Starglider* contained a novella, written by author James Follett.

"My and Follett's agent was Jacqui Lyons, a former literary agent who had decided to be the first agent in computer games," Jez explains. "It was Jacqui's idea to include the novella in the box, as it had been successfully done with *Elite* the previous year." (*Elite: The Dark Wheel*, written by late fantasy author Robert Holdstock, was packaged with most versions of *Elite*.) "James turned out to be an excellent choice, and he and I hit it off," Jez continues. "We bounced ideas off each other and he was involved early enough to influence the game design with his story, so it worked really well."

Starglider's story revolves around the Sentinels – automated robots charged with protecting the peaceful planet of Novenia, leaving the human residents free to do sci-fi stuff. But then the Sentinels went and accidentally blew up a load of deep-space migrating birds, the Stargliders, after mistaking them for enemy craft. The futuristic answer to Bill Oddie went nuts and the Sentinels were reprogrammed to not identify the birds as threats, allowing the nefarious Egrons to disguise their ships as Stargliders and attack. Luckily, Jason and Katra, technicians extraordinaire, were away on a moon at the time of the invasion and saw everything. Not best pleased, they got themselves into a space fighter pronto and the war was on.

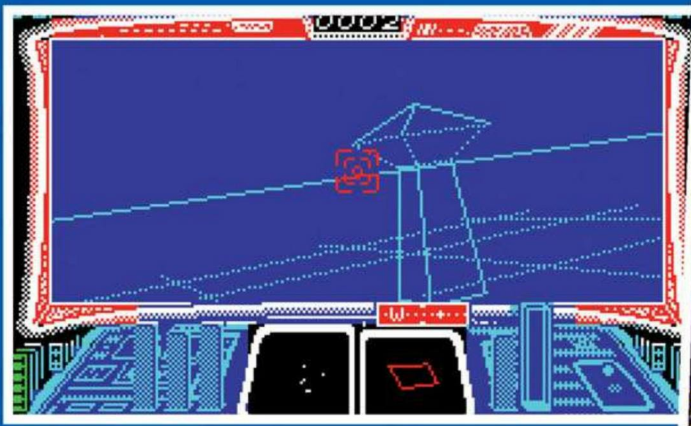
"We tried to deeply embed the story into the game," Jez says, "but the story was definitely an afterthought. I was already a year or so into the game development before James got involved, but he certainly allowed me to change or justify other things, to fit in line with the story. And I sort of loved at the time that the hero was 'Jay-son', and my 'girlfriend' was Katra."

Still only 20 years old, the release of *Starglider* found Jez meeting with considerable success. Quite a lot for someone so young to deal with. And what did he do? What do you think?

"I bought a new car. It was a Renault 5 GT Turbo. Actually, I technically bought it with my advances cheque and I recall not driving it for the first week and letting my friends drive it, because I hadn't finished the game. As soon as the game shipped, I took it for a spin and boy was it a fun car. Very chuckable."

Not content with just points on his licence, though, Jez had his business head already firmly screwed on.

"My contemporaries like David Braben and Archer Maclean were enjoying the fruits of their labour and buying nice cars and houses with their royalty cheques, whereas my cash was going straight back into the company to fund the teams and make bigger and better games, so although *Starglider* grossed a large amount of money for a 20-year-old, it all went back into the company, Argonaut, to let us get an office, hire







the teams, buy some computers. I hadn't figured out at the time how to make any money personally. It didn't dawn on me until much later that you can sell a company or go public, thus justifying not taking any money out of the company and letting it ride for a few years."

"The game was a success," Gary says, "but back then there wasn't the same spotlight on unit sales, gross revenue and so on that the industry focuses on today. Also, back in those pioneering Rainbird days, I expected every game to be a success, and everything was pretty new and exciting. It was nice to see a game that I contributed to quite significantly win awards, though."

And would Gary change anything? "I don't think I would change anything significant, based on the parameters we were working with then: available time, and the limitations of the hardware. Probably just the stupid box cover art."

Since the days of *Starglider* and its sequel, Jez has continued to move through the gaming world, helping to set up TIGA – the national trade association set up to represent the interests of game developers in the UK – and founding online poker game company Crunchy Frog (later PKR) and, more recently, mobile applications developer Origin8. But it has been quite a while since he actually sat behind a computer and delved deep into the intricacies of coding for himself.

"I miss being hands-on," Jez admits, adding: "I'm still a geek at heart, though I get to do geeky things that are non-programming these days, like design most of the tech in my uber-wired home. I keep saying that one day I will start programming again. I liked being creative and solving problems that some thought insurmountable, like having 3D surround sound in a game encoded in real-time (*King Arthur's World*) or doing 3D real-time graphics on a 2D character-mapped game console (the SNES Super FX chip). 3D features quite heavily in my past. Many of the innovations I was involved with are 3D-related, even today with 3D poker. My proudest moments were creating things that made a big difference, either to the games players or the industry.

"Of course, my mum's proudest moment was when I received an OBE from Prince Charles at Buckingham Palace." An OBE for videogames? Oh, yes! Jez San got himself one of them…

"It's sort of surreal that the government at a moment in time decided to reward someone from the game industry with such an honour," he says. "Yet again, like when I got into computer games in the first place, I was in the right place at the right time. I was one of those who was doing my bit for the industry at the time. I helped form TIGA – heck, I even came up with the name – And I was regularly giving talks at conferences and universities. I was also lucky enough to have had a company – actually two – go public and make me some cash, so I wasn't trying to profit from the industry and was in a mood to give as much back as I could. I guess this got noticed and I ended up first in line for an OBE, which was a wonderful honour and something to show the grandkids one day." *

Special thanks to Chris Wilkins for putting us in touch with Jez San, and to Richard Hewison of **birdsanctuary.co.uk** for his invaluable help with images and helping us to contact Gary Sheinwald.

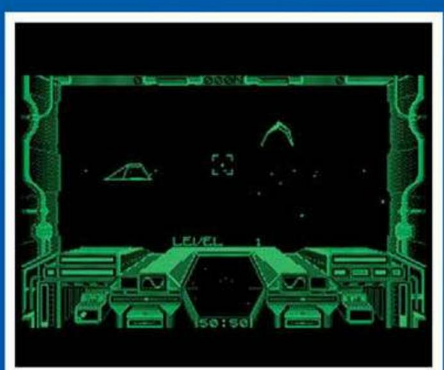
the good, the bad, and the C64 conversion

STARGLIDER APPEARED ON the Amiga, Atari ST, Spectrum, CPC, Mac, DOS, C64 and others. Most were well received. But let's not talk about the C64 version.

"I did the ST and Amiga versions myself," Jez says. "I should've done the Mac version too, but let someone else do it. The rest were done by other coding groups…"

Oh, go on, then. What about that C64 version? While *Elite* had demonstrated that Commodore's beauty had the guts to pull off a game like this, the C64 version just lacks in all departments. Slow, dull and lacking the speech and extra missions, this was a sorry job by dev Solid Image. *Zzap!64* said of its £15 price: "That's a high expenditure for slick packaging and a mediocre game."

"The C64 version was pretty difficult, done by Glyn Williams and Joey at Solid Image. I agree it wasn't great, but how much of that was the fact that the machine was very underpowered? Glyn and Joey were excellent programmers and went on to do better things."





» [Amiga] *Starglider 2* was even more advanced than the first game, but was released using the ill-fated Argonaut Dual Loading System.



» [Spectrum] The Spectrum game was probably the best of the 8-bit versions. Sleek, fast, and with digitised speech and extra missions, it was a deserved *Crash* Smash.



RETROREVIVAL

PC-Genjin

FANCY A BONK?



» PC ENGINE
» RED COMPANY
» 1990

Sometimes you see a game featured in a magazine and know that you just have to have it, no matter what the cost. Viewing *PC Kid* in *CVG* was one of those times.

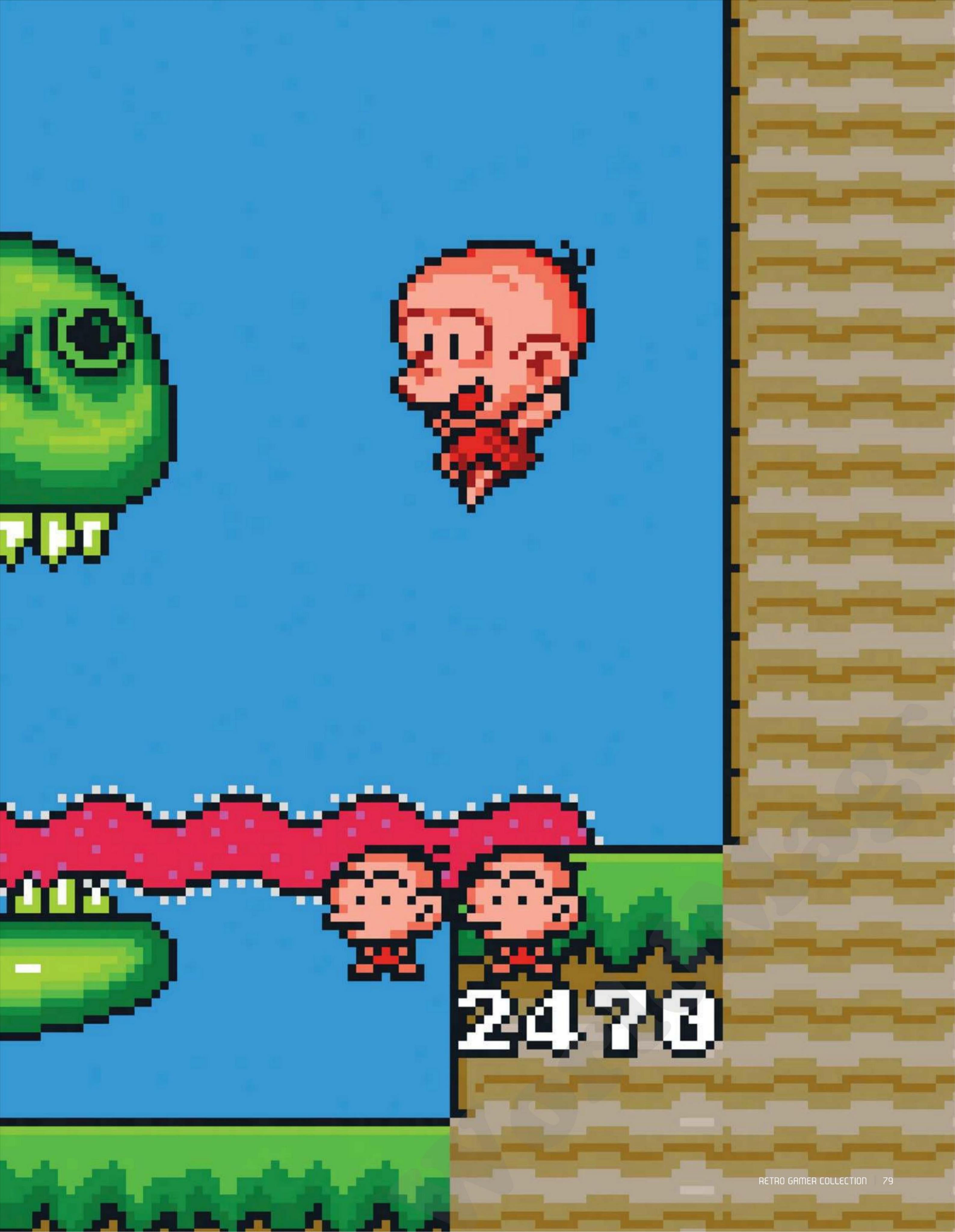
I'd already been drawn to the machine due to the likes of *Gunhed* and the astonishing-looking port of *R-Type*, and I would impatiently wait for each new issue in the hope of more PC Engine goodness.

Unfortunately, the PC Engine's high price tag ensured that I wouldn't be able to treat myself to a machine until I was a working adult, and when I finally bought myself a PC Engine GT – I love handhelds – *PC-Genjin*, or *Bonk's Adventure* as it was hilariously known in the States, was one of the first games I picked up for it.

I wasn't disappointed either, as it's a truly wonderful platformer. Then, of course, there's Bonk himself – or PC Kid, as I'd always called him. Packed with Mario's charm and Sonic's irrepressible cool, he became something of a figurehead for NEC's tiny machine and went on to star in numerous sequels and spin-offs.

But that first game, especially when viewed on the PC Engine GT's glorious little screen, was where it all began for me, and I was not disappointed with the end result. The bright, cheerful backgrounds, cute animation and excellent audio didn't look aged when I first played the game in 2002 – yes, it took that long for me to finally get a machine – and it still looks great now. Gameplay is admittedly simplistic, but it remains fun to play thanks to its well-structured level design, great variety in its environments and its entertaining nature. Mario may have had his bottom bounce and Sonic his spin dash, but PC Kid had a devastating head butt that could always be guaranteed to raise a smile. After all, who doesn't like running around, nutting dinosaurs?

While the sequels were arguably better games, I'll always have a special fondness for the original. In fact, this spread is an approximation of the very first screenshot I ever saw of it. That's how much of an impact it had on me back in the day. *


2470



FROM THE ARCHIVES

RETRO GAMER DIGS UP THE FILES OF THE CLASSIC COMPANIES OF OLD

Virgin Games Part 1

Virgin's involvement in games started modestly, but it grew into an international publisher worth hundreds of millions. In this first instalment, Richard Hewison looks back at the birth of Virgin Games

Oxford University graduate Nick Alexander started his working life at British Rail in the Seventies, then quickly moved on to EMI and then HMV Retail, where he became the company's marketing manager. However, retail marketing wasn't really where he wanted to be, and as a new year dawned he started looking at the exciting new frontier of home computers and videogames.

"I got into the computer games business at the beginning of '82 when I started working at Thorn EMI Video Programmes," he remembers. In the early Eighties Thorn EMI was developing ambitious video disc programmes for the VHD Video Disc System, which sadly failed to appear outside Japan. Thankfully, its home computer software division was producing games for more familiar formats like the Atari 400/800 and the Commodore VIC-20, but it wasn't too long before Alexander began getting frustrated.

"I wanted to get more directly involved with creating products and I also wanted to do something international," he explains. "In '82 the market was just beginning to take off, with lots of people starting to write games, and I started thinking about setting up a computer games company of my own. Everybody else was – why shouldn't I?"

In what turned out to be a career-defining moment, Alexander then received an unexpected telephone call from a very famous entrepreneur.

"I got a call from Richard Branson, who wanted me to become managing director of Virgin Retail," says Alexander with a smile. "So I went to see him and had a very strange interview where he tried to offer me the job to run Virgin Retail, and instead I replied saying that I was actually thinking of starting my own computer games company."

Richard Branson's response was quick and straight to the point, as Alexander remembers with some clarity: "He said, 'Yeah, why don't you come and do that, and perhaps you can come and help us with some other things as well.'"

No further questions; just a simple 'yes' to what must have been an unexpected proposition as far as Richard Branson was concerned. "But that's just the kind of guy he is," says Alexander, remembering the moment fondly.

What now?

Alexander started Virgin Games in early 1983, on his own and with very little idea of what to do next. "It was my first start-up business, so I phoned Richard Branson and asked, 'What can I get on with and what do I need to talk to you about?' because I reported directly to him and he basically just said to get on with it and 'I'll give you a call every couple of weeks and you can tell me what's going on'," he recalls, laughing. Being given free rein to run the new company sounds like an ideal situation, but it wasn't always like that.

"The drawback is that, on occasion, you do want to talk something through with somebody, and Virgin was diversifying into more and more things back then so it was

INSTANT EXPERT

Virgin Games' launch party in 1983 included a Maggie Thatcher lookalike, some programmers, and a signing session with Richard Branson. The launch was held at the Roof Gardens on top of the old Derry & Toms building in Kensington High Street, London.

Virgin used to organise annual weekends away, and Virgin Games went to Portugal in 1983 to help Richard Branson celebrate the tenth anniversary of Virgin Records being founded. As the Virgin empire grew, it became impossible for entire companies to join in, so participation became more fragmented. One year, some Virgin Games employees got to spend a long weekend away with Richard Branson in Jersey, enjoying rides in the Virgin hot air balloon, go-kart racing and various other activities.

Virgin Interactive Publishing produced an LV-ROM product in 1987 called *North Polar Expedition* for a suitably equipped BBC Master computer. It was billed as a "multi-role educational adventure" and included a copy of Ranulph Fiennes' book, *To The Ends Of The Earth*, which detailed the first pole-to-pole circumnavigation of the globe. The product sold around a hundred copies. It was later resurrected by Virgin Multimedia for the Commodore CDTV in 1992.



STRANGELOOP

> **“We got hundreds of games sent to us, and most were from 14 to 18-year-old boys”**

ON THE ORIGIN OF VIRGIN GAMES' INITIAL CROP OF RELEASES



sometimes a little frustrating,” elaborates Alexander. After a few weeks of solitude, he began recruiting additional staff.

“I brought in Angela Fitzgerald, who organised the office, and Hugh Band came on board as marketing director, so initially there were just the three of us in the office working very long hours.”

The office in question was at 61-63 Portobello Road in central London, but it wasn't an ideal working environment.

“Unfortunately we had no windows, so it often felt like we were completely cut off from the world. Sometimes we would go outside and discover it had been snowing, and other times we would realise it was a hot, sunny day,” remembers Alexander. “Virgin Publishing and Virgin Video were in the same building, and once we came out of the office and there was Boy George standing there, so it was interesting and all quite a laugh!”

Games

With the office up and running, the next task was to get some product to sell. Virgin attracted submissions by issuing a press release announcing that the company was looking for titles to publish.

“We got hundreds of games sent to us,” says Alexander, “and most were from 14 to 18-year-old boys programming in their bedrooms.” A number of games were selected as Virgin's launch titles, including a sheepdog trials game called *Sheepwalk*, which Alexander thought “was actually very innovative”; *Golf*; *Starfire*, which was a version of the classic unofficial *Star Trek* tactical game; *Mission Mercury*; *Landfall*; a graphical exploration game called *Space Adventure*; and *Bug Bomb*. Later titles included *Dr Franky And The Monster*, *Angler*, *Ghost Town*, *Ambush* and *Bitmania*, to name a few. In hindsight, the quality of some of those early titles was questionable.

“In all honesty, judging the games wasn't really our forte,” admits Alexander. “We were very good at marketing but not so good at knowing what was a hot property and what wasn't.”

Despite the lack of high-quality titles, Virgin Games did very well in its first year, and it also had a slightly different slant to its marketing.

“I had this idea of promoting programmers like recording stars, so we included a picture and a biography of the programmer with the game that they had written,” explains Alexander. “We had the program on one side of the tape and we got some specially edited music from Steve Hillage or other Virgin acts on the other.”

The front of the inlays were very colourful, using large diagonal stripes and different colour combinations for different formats – green and pink stripes for the Commodore 64, blue and pink for the Spectrum, and so on. The advertisements placed in magazines covered multiple

BY THE NUMBERS

1 Nick Alexander started Virgin Games with just one employee – himself!

3 The number of *Dan Dare* games published by Virgin Games.

4 The number of European territories to which Virgin Mastertronic distributed Sega products.

5 The number of *Now Games* compilations released by Virgin Games between 1985 and 1988.

8 The number of years that Virgin Games ran until it was split into two, forming Sega Europe as a result

27 How old Nick Alexander was when he first started Virgin Games in 1983.

45 The initial minority percentage stake that Virgin bought in Mastertronic in 1987.

100 Sales figures for Virgin Interactive Publishing's *North Polar Expedition* on LV-ROM, a format based on LaserDisc.

300 Richard Branson is one of the 300 richest people in the world, with an estimated fortune of £2.97 billion.



» [Spectrum] Richard Branson got to appear in the *Virgin Atlantic Challenge* game in 1986.



CHRIS SIEVEY

Chris Sievey – who sadly died earlier this year aged just 54 – wrote *The Biz* for Virgin Games, which was a pop music strategy game on the Spectrum.

He was perhaps best known for being in the pop group the Freshies and for creating and inhabiting the papier-mâché-headed Frank Sidebottom, a character originally introduced on the B-side of *The Biz*'s cassette.

As Frank, Chris appeared in TV and radio shows, and the character also toured as a stand-up comedian in the late Eighties and early Nineties.

games, and also featured a curious mascot called the Laughing Shark.

"I was pretty rubbish at drawing, but I used to do this cartoon character at university called Laughing Shark, so we used him as a mascot, although thankfully he was professionally realised for us by an artist called Dave Dragon," says Alexander with a huge grin.

He also came up with the idea of a Virgin Games tour: "We bought a double-decker bus [the former Southampton #104], decorated it in black and white stripes with the Laughing Shark on the side, kitted it out with computers, and then took it round the country to shopping centres and schools, and that generated a lot of publicity."

Other marketing ploys enticed customers to join a club called the Virgin Games Gang, which included a newsletter with competitions, news and offers. However, just as Virgin Games was making progress, the industry threw a serious wobble.

Changes

"The bottom dropped out of the market at the beginning of '84," remembers Alexander. "In '82 all the retailers had run out of stock and weren't carrying any inventory, so they all over-ordered in '83. You have to remember that at this point there were hundreds of computer game publishers in the UK alone, and as a result they all produced more product than they had the year before to meet this perceived demand, which then didn't appear."

While a number of publishers were feeling the squeeze, a new company appeared in 1984 that changed the market forever. With a low £1.99 price point for games that were similar to, and in some cases better than, games selling for three times the price, Mastertronic's approach was innovative, and it had a huge effect on the economics of selling games.

"The wholesale price of a typical game dropped from around £3.80 to about 35 pence in just two or three weeks, so that wasn't very good!" reveals Alexander with some candour.

"Ultimate Play the Game also came out with their Spectrum games around the same time, which blew everything else out of the water, and we didn't really have a clue how to respond to it," he admits. What he did know was that they would have to up their game if Virgin was to survive in what had become a very cut-throat market, so new staff were recruited, including technical manager Steve Webb, as well as commercial director Jeremy Cook and Patricia Mitchell, who were both former colleagues of Alexander's from his Thorn EMI days.

"I could see the writing on the wall at Thorn EMI so I decided I would leave," remembers Mitchell. "Nick Alexander was obviously in an exciting position having gone off to work with Richard Branson, so I gave Nick a call and basically said 'gissa job'!"

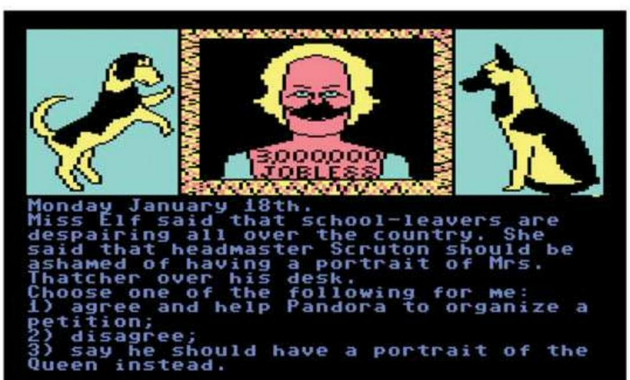
Mitchell originally joined as a programmer, thanks in part to her experience of assembler on the Atari 800. She started working on *Save The Hippie* for the Commodore 64, but this was eventually abandoned as Virgin Games began a process of re-evaluating its products and practices. As a result, her role changed and she began evaluating the game submissions that were still coming in by post. She also started writing the instructions and copy that appeared on the cassette inlays.

A new policy of releasing fewer games but of a much higher quality than before

> **"Buying Leisure Genius outright was good business that kept going year after year"**
> WHY VIRGIN EXPANDED AND BOUGHT LEISURE GENIUS IN 1986

TIMELINE

- **1982** NICK ALEXANDER ASKS RICHARD BRANSON TO LET HIM SET UP A COMPUTER GAMES PUBLISHING COMPANY
- **1983** VIRGIN GAMES' FIRST TITLES ARE RELEASED IN THE SUMMER
- **1984** VIRGIN GAMES TRIES ITS HAND AT BOARD GAMES WITH HYPE, BUT FAILS MOSTLY DUE TO A HIGH RRP



» [Amstrad] Level 9 Computing's second *Adrian Mole* game was taken on by Virgin after Mosaic disappeared.



» Nick Alexander (middle, arms crossed) and a host of programmers gathering outside the Virgin Tour Bus in 1983.

- **1984** VIRGIN GAMES' MARKETING TEAM IS LOANED TO HELP LAUNCH THE VIRGIN ATLANTIC AIRLINE BETWEEN APRIL AND JUNE
- **1984** VIRGIN GAMES ANNOUNCES A CHANGE IN PUBLISHING PHILOSOPHY, DROPPING SOME GAMES, REDUCING PRICES ON OTHERS AND PROMISING TO UP THE QUALITY IN FUTURE
- **1985** RABBIT SOFTWARE IS BOUGHT BY VIRGIN GAMES, AND THE ACQUISITION IS ANNOUNCED IN HYDE PARK
- **1985** THE FIRST NOW GAMES COMPILATION IS RELEASED ON THE SPECTRUM WITH GAMES FROM BEYOND, VIRGIN, THE EDGE, MIKRO-GEN AND INTERCEPTOR SOFTWARE
- **1986** LEISURE GENIUS SEEKS TO EXPAND AND IS BOUGHT BY VIRGIN GAMES
- **1986** VIRGIN GAMES PUBLISHES DAN DARE FOR THE 8-BIT FORMATS TO GREAT ACCLAIM
- **1987** VIRGIN GAMES INITIALLY BUYS 45 PER CENT STAKE IN MASTERTRONIC
- **1988** VIRGIN GAMES BUYS THE REMAINING 55 PER CENT OF MASTERTRONIC AND CREATES VIRGIN MASTERTRONIC
- **1988** VIRGIN MASTERTRONIC BECOMES UK, FRENCH AND GERMAN DISTRIBUTOR FOR SEGA
- **1990** SEGA EXTENDS THE DISTRIBUTION DEAL WITH VIRGIN MASTERTRONIC TO INCLUDE SPAIN
- **1991** VIRGIN MASTERTRONIC'S SALES AND MARKETING DEPARTMENT IS SOLD TO SEGA
- **1991** NICK ALEXANDER LEAVES VIRGIN MASTERTRONIC TO RUN SEGA EUROPE

was agreed. *Strangeloop* by Charles Goodwin and *Sorcery* on the Spectrum by Martin Wheeler were certainly vast improvements on previous Virgin releases. Other titles included *The Biz*, which was a *Football Manager*-style game set within the music industry, and *Falcon Patrol 2*.

More in-house developers came onboard, including Andy Wilson, Ian Mathias, Charles Goodwin, Simon Birrell and Dave Chapman, and the entire company moved to another building just round the corner, at 2-4 Vernon Yard.

"We moved out of Portobello Road because we had outgrown the office," explains Alexander. "Virgin Records had just vacated Vernon Yard, and although it was a decrepit building, it had a wonderfully lucky character all of its own."

Winging it

While other software publishers were content to release flight simulators for home computers, Virgin Games went one better and ended up getting involved in the real thing, as Alexander reveals.

"In '84 Richard [Branson] decided to get involved in the airline business and started Virgin Atlantic, and because I knew something about marketing he asked if I would be the marketing director for its first year. Because games were doing nothing at that point I took virtually everybody off Virgin Games – which was about seven or eight of us – and we became the marketing department for Virgin Atlantic!" he recalls incredulously. "It was just completely bonkers. We were responsible for the air hostesses' uniform, the in-flight food, the in-flight entertainment, the magazine, the aircraft livery… We really didn't have a clue at all!"

With the majority of staff on loan, a small team of in-house programmers and technical people kept Virgin Games ticking over, including Patricia Mitchell, who got to look after marketing while everyone else was off playing with aeroplanes.

"I was deemed the most suitable person because I was already doing the copy-writing, and I took on production too while Nick, Hugh Band and the others were away," she explains.

Virgin Atlantic got permission to fly on 1 April 1984 and the first flight was in late June, so that three-month period was, as Alexander puts it, "totally ridiculous, but then we did put out more product as a computer games company for the autumn".

Acquisitions

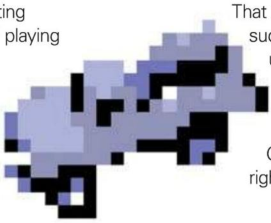
Soon after the team had returned to games, Alexander made an opportunistic business decision, buying a fellow publisher that had fallen on hard times.

"We bought Rabbit Software because I thought that it would give us some profile and show that we were on the way back after the market collapse," recalls Alexander. "We paid very little for the label, and apart from the launch photos where we were wearing rabbit suits, we didn't do much with it. It was a piece of marketing."

Virgin Games then moved up another few gears and began to lay the foundations that would ultimately turn it into a consistent, high-quality games publisher.

"Later on we bought Leisure Genius," says Alexander. Leisure Genius was originally set up in early 1982 specifically to write home computer versions of *Scrabble* after a British national *Scrabble* champion asked Jon Baldachin if it was possible to program a computer to play the game. After discussing the rules and dissecting how *Scrabble* experts played, he concluded that it was feasible, so he approached Spear's Games, which gave him limited rights. A lucky accident saw Baldachin make contact with a student who was writing a version of *Scrabble* on the Apple II as part of his university PhD.

"Off the back of that Apple II version we got approached by Psion, who were working on the then-unannounced Sinclair Spectrum, and we came to an arrangement to license *Scrabble* development to them. That turned out to be very successful and it allowed us to properly finance the company," remembers Baldachin. One thing led to another, and Leisure Genius ended up with the rights to the most recognisable



WHERE ARE THEY NOW?



Nick Alexander

Nick Alexander

Nick ran Sega Europe for three years after leaving Virgin, then joined Pearson where he bought, ran and then sold Future Publishing. He then became involved in a number of companies including Barrysworld and 365. Nick has also consulted for Lego, Nokia and Ministry of Sound, and was chairman of NaturalMotion, and then Player X. Today Nick is executive chairman at Connect2Media and chairman of Tee Pee Games.

Patricia Mitchell

Having met Nick Alexander when they worked together at Thorn EMI, Patricia Mitchell worked with him at Virgin Games and later went on to work for him at both Sega Europe and Pearson New Entertainment. She also worked for Silicon Artists as a production director. Today she is vice president of sales for iProfile, a company that sells business intelligence online to IT companies.

Andrew Wright

Andrew left Virgin and moved to Sega Europe in 1993. He also worked for BMG Interactive, Bastion, Golden Casket and Krome Studios and spent some time working in online gambling. Andrew is currently involved in a number of online companies, including Fabulous.com and Drop.com.au.

Jon Baldachin

Jon left Virgin Games a few years after Virgin bought Leisure Genius to go freelance, writing the C64 version of *Monopoly*. He then left games publishing completely and returned to working in IT in the financial sector. Today, Jon is director of Forward Thinking – a company that provides help and advice to small and medium-sized enterprises.



Andrew Wright

Steve Clark

After Virgin, Steve joined Pearson to work on Europe Online, then moved to BT Wireplay. When that didn't last, Steve set up a consultancy business doing contract work for clients including Carlton, Sainsbury's, M&S and Sky. In 2006 he joined Gamesys, the e-gambling company behind Jackpotjoy and Sun Bingo but recently left and is now freelancing again in technology, mobile and e-gambling.



Patricia Mitchell



Steve Clark

SIX OF THE BEST



Sorcery (Amstrad CPC)
The Amstrad CPC version of Martin Wheeler's original Spectrum game was enhanced and improved when Dave Chapman converted it for the Amstrad CPC range, including colourful graphics and quick, incisive gameplay.



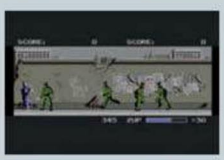
The Biz (Spectrum)
Although it might have looked a bit dull, this text-only strategy title somehow managed to create a strangely addictive game where you could end up as big as Culture Club or Duran Duran. Who needs *The X Factor*, anyway?



Shogun (Commodore 64)
This sideways-scrolling strategy adventure game based upon James Clavell's novel featured some very clever AI, where killing the right adversaries and making allies of others helped you to achieve Shogun status.



Dan Dare (Spectrum)
A technically excellent game on the Spectrum, giving the player a colourful adventure game but without the usual attribute clash problems associated with the Speccy. This game was hugely popular and for good reason.



The Ninja Warriors (Amiga)
The Sales Curve and Random Access produced a superb conversion of the Taito coin-op in 1989, cramming the three-screen display into a widescreen format. It also avoided interruption to the action by introducing the dynamic loader system.



Super Off Road (Amiga)
Graftgold created marvellous versions for both 8-bit and 16-bit platforms of this *Super Sprint* clone. It featured tiny cars, cash prizes that allowed the player to upgrade their vehicle, and some great multiplayer racing action.

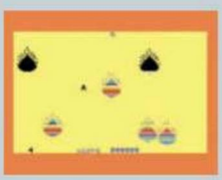
THREE TO AVOID



Yomp (Spectrum)
The Virgin launch titles from 1983 are an easy target, but *Yomp* was basically a poor *Frogger* clone. The in-game preamble described para platoons, enemy vehicles, radar scanners and minefields. The ruse worked right up until the player played the game.



The FA Cup (Spectrum/ Commodore 64/Amstrad CPC)
Apparently designed by sports journalist Tony Williams, this FA Cup game was nicely presented but had minimal input from the player and was almost totally text-based. *Football Manager* did it better a few years before this game came out.



Bitmania (Commodore 64)
Yes, another of Virgin's earliest releases and a shoot-'em-up with very few redeeming features. Sparse graphics, basic gameplay and very little to recommend. You can survive for a long time by hugging the bottom of the screen and not doing anything!

board game brands in the world, including *Monopoly*, *Cluedo* and *Risk*, as well as *Scrabble* and *Scalextric* on a wide variety of different platforms. By 1985, fellow founder Peter Deutsch felt that to take the company to the next level it needed new investment, so he approached Virgin Games.

"Buying Leisure Genius outright was good, solid business that kept going year after year because we were able to do new versions of the games for all the new formats, and it gave us good, stable revenues," explains Alexander. As part of the deal, Jon Baldachin and most of his team joined Virgin Games. Baldachin became director of software, and he had a fundamental effect on the in-house programming team.

"At Leisure Genius we had created a development network infrastructure based on some early Apple hardware and used it as a central library with version control," says Baldachin. With this high-speed serial 'ring' network installed at Virgin, they were able to separate bespoke code for graphics and sound from the central game code, which made writing conversions a much more efficient process than before.

"What I brought in was a more formal approach that introduced more structure," Baldachin explains. "It took a bit longer at the beginning, but once it was done it was much faster to write and test the code."

Compilations and challenges

In 1985, Virgin Games started releasing a series of compilations featuring games from a variety of publishers, including itself. Inspired by EMI and Virgin's joint *Now That's What I Call Music* chart compilations, this new series was called *Now Games*, and five compilations were produced between 1985 and 1988.

"The first few *Now Games* did quite well, then the other publishers realised that they could do compilations too, so why should they license their games to us?" laughs Alexander.

1986 was a very productive year, including successful high-profile releases like *Dan Dare*, based on the famous Fifties British sci-fi character; an official FA Cup football game; a game based on James Clavell's bestselling novel *Shogun*; and the Leisure Genius products. There was even time for some nepotism in the guise of the *Virgin Atlantic Challenge* game, which tied in with Richard Branson's ultimately successful second attempt at crossing the Atlantic in the Virgin Atlantic Challenger II boat. Virgin Games followed that title the following year by releasing *Trans-Atlantic Balloon Challenge*, based on Richard Branson and Per Lindstrand's successful Atlantic crossing in a hot-air balloon.

Sega master stroke

While Richard Branson was finding new ways to cross the Atlantic, 1987 proved to be a pivotal turning point in the fortunes of Virgin Games and ultimately its managing director, Nick Alexander.

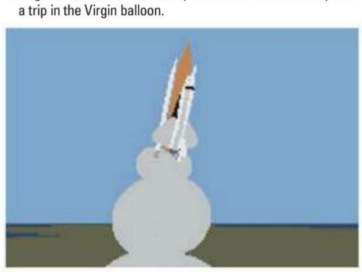
"That year we bought a minority 45 per cent stake in Mastertronic," he states. "At the time they were the kings of budget software and we bought them because budget software was taking a larger share of the market."

But why would Mastertronic want to sell part of its business to another publisher? Alexander provides the answer: "They needed to raise some money because they wanted the UK distribution rights for Sega products, and Sega Japan would only deal with companies who were able to pay in advance."

At first, things appeared to go well. Mastertronic pre-sold 25,000 Master



» Virgin's annual weekend away included a visit to Jersey and a trip in the Virgin balloon.



» [Amiga] Virgin's *Space Shuttle Simulator* for the Amiga, ST and PC was incredibly detailed.



» Nick Alexander and Richard Branson at the Virgin Games launch party in 1983.



» Virgin's *Scrabble* conversion running on France Telecom's Minitel system.



☐ MINITEL SCRABBLE

Programmer Steve Clark was employed by Nick Alexander and Jon Baldachin in 1987 to write an online version of *Scrabble* for France's Minitel system that proved to be very lucrative for Virgin Games.

Baldachin remembers how it happened: "France is a nation of avid *Scrabble* players, and we were approached by Albert Loridan of Micromania. He brokered a deal between us and France Telecom to supply Minitel with online *Scrabble* that people paid for through their phone bill."

Clark's job was to convert the original PC code to run as the back-end on an Altos 80286-based system running Xenix. He first optimised the code, then wrote what were effectively APIs that allowed the back-end code to link with the front-end being written by Albert Loridan's team in France.

Clark then flitted between France and the UK to get the job done, writing some very clever code that allowed the system to run 256 games simultaneously, each with up to 256 players. The Minitel service called SCRAB was a huge success when it was launched in 1988. It was so robust that the game was still running bug-free over ten years later!

> **"Virgin were struggling to fund the marketing and Sega wanted more and more control"** THE DIVISION OF VIRGIN MASTERTRONIC

Systems and 55,000 cartridges in the run-up to Christmas. "Unfortunately, Sega then delivered all of the products on Boxing Day, which meant that Mastertronic and all of their distributors found themselves in a cash flow crisis because they had paid up front for products that turned up late and the retailers cancelled all their orders," remembers Alexander.

Sega's French distributor, Master Games, got into financial trouble as a result, and its German distributor, Bertelsmann, which was part of BMG, had enough and refused to deal with Sega ever again.

As a result of the Christmas fiasco, Mastertronic needed to sell the remaining 55 per cent of the business to Virgin or risk going bankrupt. In what was a complex business deal, Mastertronic's founding members – Frank Herman, Martin Alper and Alan Sharam – remained with the company. Virgin therefore became the sole owner of a new business venture branded Virgin Mastertronic, and in early 1988 Alexander was approached by Sega and asked if Virgin wanted the French, German and UK distribution rights.

"I thought it was a good idea so I said yes," says Alexander, understating the importance of that decision. Sega's Master System games console ended up doing well in Europe, and was to be followed by the phenomenal success of the 16-bit Sega Mega Drive. Virgin also got to publish a number of home computer conversions of Sega coin-ops as a result of this deal, including *Golden Axe* and *Shinobi*.



Soon afterwards, Andrew Wright joined Virgin Mastertronic as budget product manager, bringing with him a wealth of experience in PR.

"I was initially responsible for product acquisition and marketing for the Mastertronic label," says Wright. His main responsibilities were co-ordinating the marketing campaigns, public relations, package design and looking after the instruction manuals. He also got to work closely with the development department regarding product selection.

Wright clearly relished working at Virgin despite it being a very busy transitional period when he first joined: "I'm not sure that Virgin really understood what they'd got when they first bought Mastertronic, so it was challenging to integrate the businesses."

Meanwhile, the internal development team expanded, with relative industry veteran David Bishop joining in 1989, initially as a producer and then games designer. By then, Virgin was publishing a huge range of games across multiple platforms, with 16-bit titles beginning to dwarf 8-bit games by some degree.

Divide and conquer

Virgin Games continued to grow, and in 1990 it extended its distribution deal with Sega for another three years, this time including distribution in Spain. Just a year later, Virgin Mastertronic was spending more and more money on marketing Sega's products in Europe, to the point where it eclipsed the games publishing business. The imbalance hadn't gone unnoticed by Virgin Games' MD.

"In the City they often described the Virgin empire as 'fully invested', which meant that any profits went into starting up new businesses, so we never had any money of our own," he laughs. "When you consider the kind of margins we were making on the Sega distribution deal, Virgin were struggling to fund the marketing and Sega wanted more and more control of their European distributor."

This all came to a head in 1991 when it was decided to split Virgin Games into two separate businesses. "The sales and marketing part of Virgin was sold to Sega and I went to run that, whilst the publishing part was kept by Virgin," recalls Alexander. That decision ended his eight-year association with Virgin Games and Richard Branson. It was an amicable split, and was made for good solid business reasons.



So, Nick Alexander went off to run the new Sega Europe venture with fellow marketing colleagues Philip Ley and Simon Morris, among others, and Virgin Games prepared to transform itself into a radically different beast, under the stewardship of former US Gold supremo, Tim Chaney…

Continued on page 106

THE UNCONVERTED

Arcade games that never made it home

IN DEPTH



» Lucky and Wild's reactions to the chaos are displayed in the car's rear-view mirror, which even shows enemy vehicles approaching from behind.

» The game's viewpoint plonks you right inside the car, and the dashboard and bonnet gradually deteriorate if they take too much gunfire.

» Each level begins with the boss shooting away the windscreen before making his escape, leaving Lucky and Wild to give chase while picking glass from out of their mullets.



LUCKY & WILD

■ **Developer:** Namco ■ **Year:** 1992 ■ **Genre:** Racing/shooting

■ **It should be pretty clear from just a quick glance at these screenshots that *Lucky & Wild* was Namco's take on Taito's popular pursuit racer, *Chase HQ*. But it was made the better game – according to one in-house member of Retro Gamer, anyway – by one strikingly simple factor: simultaneous two-player.**

Lucky & Wild was an over-the-top, high-octane on-rails thrill ride that allowed two people to experience the sensation of being in a high-speed car chase, shooting at criminals, smashing windows, and administering law and order the Hollywood way: with deft driving and gunfire.

Lampooning bromance action cinema, Namco cribbed heavily from buddy cop films, such as *Lethal Weapon* and *Tango & Cash*, to great effect. The game's wafer-thin story told the tale of two chalk and cheese police officers – one named Wild, who sported an Axel Rose-style blond fountain mullet; the other, Lucky, dressed in a smart white suit and slick black hair – on a mission to bring down a criminal drug ring called 'Big Cigar'.

Each of the game's five stages kicked off with an amusing preamble, which saw the level's boss turn *Lucky & Wild*'s car windscreen into razor-sharp confetti before making his escape, setting the scene brilliantly for the chaos ahead. The two cops had to then pursue their target on a thrilling on-rails car chase and arrest the suspect by sticking enough bullets into his vehicle that it started to resemble a metal sponge.

As well as its unsubtle action movie sensibilities, *Lucky & Wild* was also made conspicuous by its steering wheel and dual-pistol controls. They allowed either one skilful player to drive and shoot simultaneously, or, as it was clearly meant to be experienced, with one person concentrating on the driving while a pal wielded both guns. The latter play method offered a real sense of being in your own buddy cop film and afforded you enough breathing time to shout nonsensical action movie quips during the chaos too.

Why *Lucky & Wild* never found a home release will probably remain a mystery. We can only surmise that it might have had something to do with the game's busy control system, as a home equivalent would have been essential to re-creating the game's charm, but would have also been costly. That the game was quite hard to come by indicates that it probably wasn't a terribly successful release anyway, and that's a real shame, as it remains one of the most entertaining arcade action racers ever designed.



CONVERTED ALTERNATIVE

CHASE HQ 1988

If you want to experience the thrill of chasing perps from behind the wheel of a souped-up police car then the alternative can only really be the title that popularised the idea: Taito's sublime *Chase HQ*. Owing to its popularity and classic stature, the game has been ported to pretty much every machine under the sun.

NY CAPTOR

■ **Developer:** Taito ■ **Year:** 1985 ■ **Genre:** Gun game



» [Arcade] The third stage of *NY Captor* is clearly inspired by Taito's arcade smash, *Elevator Action*.

■ **Playing like a mixture of *Elevator Action* and *Point Blank*, this is notable for being the first lightgun game to be released by Taito.**

Assuming the role of a super cop who is on a mission to cleanse a city of goofy olive-suited gangsters, the game is split between three looping stages, kicking off outside a luxury mansion, moving on to a city street, and then ending in an assault on a high-rise building. The game is littered with various ways to earn extra points, and score attack fans will be aiming to avoid shooting the hapless civilians who resemble Shigeru Miyamoto, blast balloons, hit lights onto the heads of enemies, and hone their shooting skills in the game's *Generation Game*-style conveyor belt bonus rounds. And typical of Taito, Chack'n, Ms Chack'n and Monsta (aka Baron Von Blubba) from *Chack'n Pop* – the developer's spiritual forerunner to *Bubble Bobble* – also make welcome cameo appearances during the game.

With the exception of *Elevator Action*, Taito's second wave of Eighties arcade titles were more popular than its first, and this is true for *NY Captor*. It's an enjoyable game, but one that feels a little basic compared to Taito's *Operation Wolf* – perhaps why it was never ported to home computers and consoles.

CONVERTED ALTERNATIVE

POINT BLANK 1994

Looking for a comical gun game that did make it out of arcades? Then look no further than *Point Blank*, which fits that bill rather nicely. Ported to the PlayStation, Namco's shooting gallery shooter shares *NY Captor*'s love for firearm-related humour.



CONVERTED ALTERNATIVE

AERO FIGHTERS 1992

Video System's excellent top-down shooter is very similar in looks and gameplay to *Fighter & Attacker*, and was ported to the Super Nintendo. As such, this manic war shooter is a great converted alternative. It's also a better game, which is always good.



FIGHTER & ATTACKER

■ **Developer:** Namco ■ **Year:** 1992 ■ **Genre:** Shoot-'em-up



» [Arcade] The number of planes to fly puts most shmups to shame.

■ **And the Namco obscure game dig continues with this solid vertical-scrolling plane shooter from the Japanese developer, which fans of *1942* and *Aero Fighters* (aka *Sonic Wings*) should certainly take time to investigate. Unlike most shoot-'em-ups, *Fighter & Attacker* featured no power-ups, and instead offered a dollop of variety by giving the player a staggering choice of 16 planes to pilot, which must surely be some kind of record, and all with subtly different primary and secondary fire types.**

Its gameplay is probably most comparable to Namco's *Xevious*, with the player having to rely on both gunfire to destroy airborne threats as well as air-to-surface missiles to take out enemy vehicles on the ground. Unlike *Xevious*'s Solvalou, however, some planes in the game will automatically lock on to ground enemies, saving you the job of having to move the reticule over your target. Also, and though it does come across as a bit of an afterthought, Namco included a hostage-rescue element to the gameplay, which seems to do nothing other than just beef up your high score and make you feel a little more heroic. Overall, *Fighter & Attacker* is a decent shooter, but its bland looks and setting is what probably saw it get overshadowed by far more appealing shooters, and is perhaps why no home release of the game was ever considered by Namco.

BEST LEFT IN THE ARCADE

NIGHT STOCKER

■ **Developer:** Bally Sente ■ **Year:** 1986 ■ **Genre:** Racing/shooting

■ **If *Lucky & Wild* is the crazy, chaotic, rock-and-roll *Tango & Cash* example of the steer-and-shoot-stuff genre, this earlier example by Bally Sente is its sedate, sci-fi, *Lost In Space* equivalent. Steering a futuristic turreted car across the surface of a desolate planet, you must simply drive around and collect coloured gems to replenish your ammo and shield while shooting nondescript alien bugs.**

With this then eye-catching coin-op housing a gun and steering wheel, *Night Stocker* was likely a case of the cabinet doing all the grunt work to attract paying punters, and, as such, it's little wonder the game failed to find a home release, as if you take away the novel control system there's very little to the game. Further harming its cause, of course, is the fact that it was christened with the most unexciting title you could think up for a driving action game. *Night Stocker* – seriously? It sounds like some kind of overnight stocktaking simulator.



LORD OF CHAOS

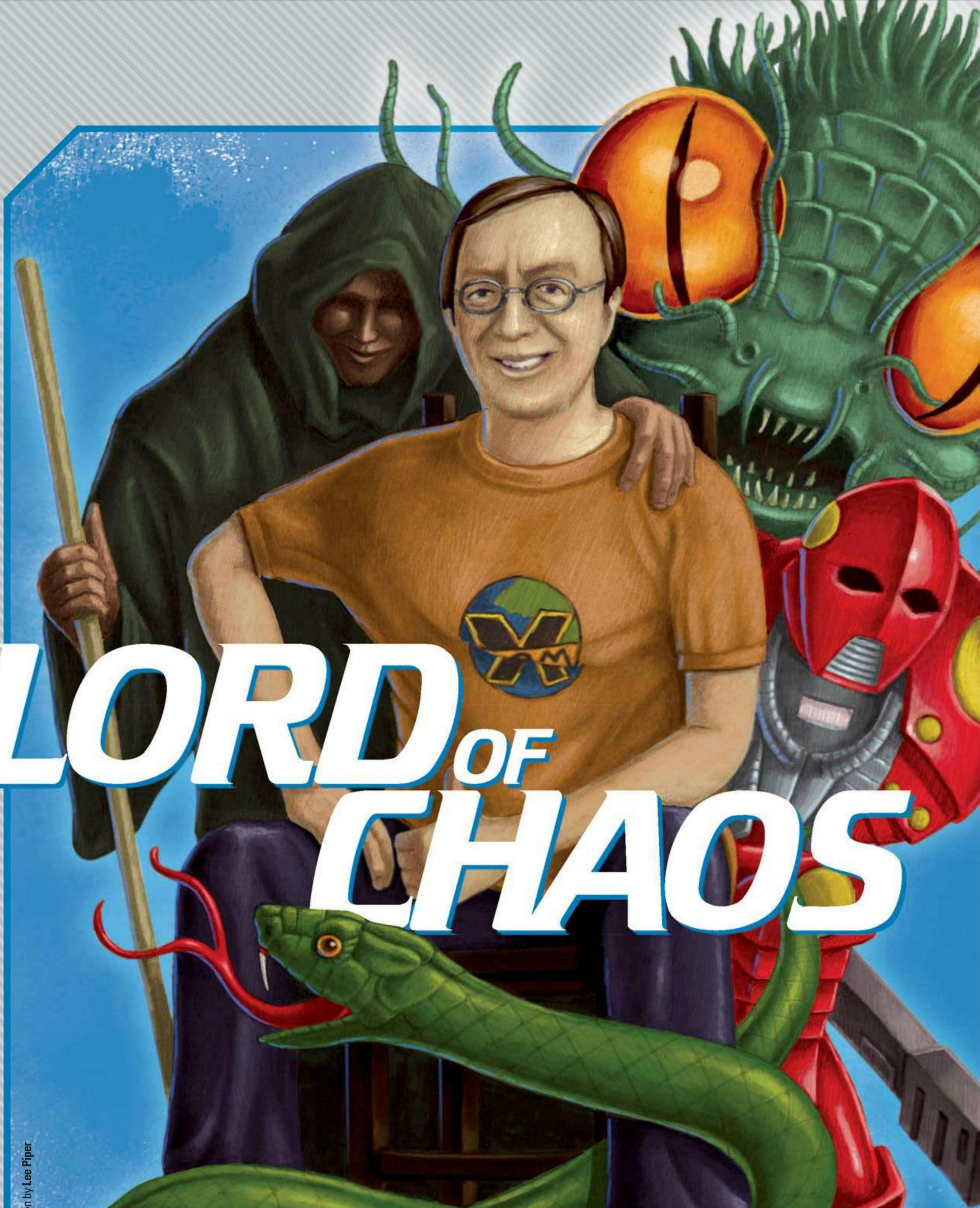


Illustration by **Lee Piper**



With a career spanning over 28 years in the industry, Julian Gollop has been the creative force behind a multitude of popular turn-based strategy games, including one of the biggest genre-busting sellers of the Nineties. In an exclusive interview, Mike Bevan catches up with the creator of Laser Squad, X-COM and Chaos

CARVING A NICHE for yourself for any considerable length of time in the videogames industry isn't easy, but Julian Gollop is one notable exception. From humble origins on the BBC Micro, inspired by a love of traditional board and strategy war games, Julian made turn-based strategy accessible and, most importantly, fun, with the likes of Rebelstar, Laser Squad and the massively successful X-COM series. Given the extent of his career, we thought we should start at the beginning…

RETRO GAMER: What would you say were the roots behind your twin passions for board games and computer strategy games?
JULIAN GOLLOP: Largely thanks to my father, I think. Ever since I was a young child we used to play all kinds of games – board games, card games, chess. Actually, we as a whole family played games a lot, especially at Christmas time – we didn't watch many films. Because I liked relatively complex strategy games, when home computers came along I immediately saw them as a very useful medium for playing these kind of games – the kind of games we went on to make.
RG: What prompted you to start designing your own games?
JG: As soon as I started playing games I was making them. Around the age of 14 I started getting into more complex games – *Dungeons & Dragons*, SPI board games, Avalon Hill… a lot of stuff. From then on I developed a big interest in strategy games.



TIME LORDS (1983) BBC Micro

Julian's debut game *Time Lords* was published by London-based strategy computer game specialist Red Shift; the company would also release his three subsequent titles. It's an interesting concept, shall we say 'borrowed' from a certain scarf-wearing BBC sci-fi hero, where players have the ability to move through a number of time zones across five planets, altering the outcome of wars and battling up to four human-controlled opponents.



ISLANDIA (1984) BBC Micro

Islandia is a naval-themed strategy game for up to four players, with *Risk*-style leanings. Players take turns sailing warships between several islands, and capturing them gives access to various resources that can be used to improve their fleet. Naval units have a specific movement range per turn, so the title can be considered the first to include the concept of AP (action points), later to become an integral feature of Julian's games.

RG: You devised *Time Lords* and *Islandia* while you were still at school. How did the publishing deal with Red Shift come about, and what do you remember about creating those two titles?
JG: I got involved through a friend of mine, who was involved in a group of war-gamers in Harlow. Red Shift was set up by a guy who was a miniatures war-gamer to create computer games. *Time Lords* and *Islandia* were programmed by a school friend of mine, Andy Greene, who later on worked with us at Mythos Games. He had a BBC Micro, I had nothing apart from some game designs, so we combined the two

Time Lords started out as a pen-and-paper game. You had to generate the universe using dice, and it required a game master to run the game. It was clearly really designed for a computer game naturally, so that was my first computer game design, I guess. For *Islandia* I wanted to do a game with some very basic resource management economics and, for some reason, naval combat. I had the idea of randomly generating a map with islands, apart from the central island where the four players start.
RG: It must have been pretty exciting for you. How did they do sales-wise? Though we're guessing you probably didn't see huge piles of royalties come flooding your way…
JG: It was a tiny amount, actually. Not being too business-savvy at that stage, the owner of the company took most of the money, of course. I didn't really know how well they were selling relative to other games; there weren't any sales charts that I knew about at the time. I don't think I ever saw them on sale in any shops. We sold them at various computer shows and mail order, and I guess some were sold through distribution channels to various independent shops. I was pretty excited when they were published – when we actually had a physical product printed with the instruction manual, and the cassette tapes were manufactured.
RG: So where did the idea of action points, which we first see in *Islandia*, and an important feature of most of your subsequent games, come from? Does the concept derive directly from strategy board games?
JG: Yes, from board games. Many of the SPI games used concepts like this. They had fairly sophisticated things like simultaneous movement and trying to simulate the cost of different actions. They didn't really work well as board games. In fact, they would have worked better as computer games.

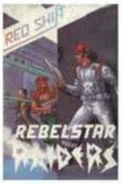


NEBULA (1984) ZX Spectrum

Julian's debut on the Spectrum was his first experience of coding a commercial game by himself. A self-styled 'game of galactic conquest', it's the first of his titles to feature a computer-controlled opponent. Alternatively, up to five human players can take on the role of a unique alien race and expand their civilisations through the various planets of a distinctive spiral-shaped galaxy.

RG: How did you get into programming games yourself?
JG: I bought a ZX81 from a friend at school for £25 and started to learn programming. I was quite amazed by it, in fact. I could really appreciate the power of these machines, even though it was a ZX81 with 1K of memory, chunky characters and no graphics processing to speak of. I then bought a ZX Spectrum and started programming *Nebula*. It wasn't a bad little game, I programmed it relatively quickly in BASIC, and it did pretty well.





REBELSTAR RAIDERS (1984) *ZX Spectrum*

The game that introduced the familiar turn-based squad strategy of Julian's later work. *Rebelstar Raiders* was also written in BASIC, but still manages to be an absorbing, tactically interesting game. Featuring three single-screen scenarios sporting graphic environments resembling detailed *Star Trek* ship schematics, it's a fun two-player experience, whether playing the defenders or the infiltrating 'raiders' faction of the title.

RG: You were obviously quite a sci-fi fan from an early age. *Time Lords* is clearly influenced by *Doctor Who*, and do we detect a bit of a *Star Wars* vibe with *Rebelstar Raiders*?

JG: I can't deny a certain influence, it's true. But still, I would probably say that the main influence was some of the science-fiction board games I'd played. Game Designers Workshop had a game called *Snapshot*. Even though I'd never actually played the game, I did read the rules. I think that game had the concept of 'snap-shots' and 'aimed shots', which is a concept I used in subsequent games, of course. *Rebelstar Raiders* turned out to be very popular with friends and people who had bought it, despite being just a two-player game.

RG: At what point did you decide that you wanted to pursue game design as a full-time profession?

TACTICS PAST

Besides Julian Gollop's impressive back catalogue, there have been plenty of decent squad-based tactical titles of merit over the years. Here are a few others we'd consider worth investigating

SABRE TEAM (1994) PC/AMIGA



PERHAPS THE ONLY serious contender in rivalling *UFO: Enemy Unknown* at the time, Krisalis Software's squad-based tactical title was a minor hit on the Amiga, but largely ignored on the PC. A shame, as it's a thrilling effort, where players command an elite SAS unit attempting to rescue hostages from terrorists in a besieged American embassy.

TACTICS OGRE (1995) SUPER FAMICOM



GIVEN THAT IT laid the foundations for Square's *Final Fantasy Tactics*, this is arguably the quintessential Japanese tactical RPG. Although never released outside Japan on its debut hardware, the game was later released by Atlus in the US on the PlayStation, and this is the version we'd recommend – if you can avoid the crazy eBay prices.

INCUBATION: TIME IS RUNNING OUT (1997) PC



THE FOURTH INSTALMENT in Blue Byte's *Battle Isle* series features a similar theme to *X-COM*, although in tone it's definitely more Ridley Scott than Gerry Anderson. This was one of the first fully 3D squad-based tactical titles, so the game engine isn't perfect, but it's a good, fast-paced combat game that *X-COM* fans should enjoy.

VANDAL HEARTS (1997) PLAYSTATION



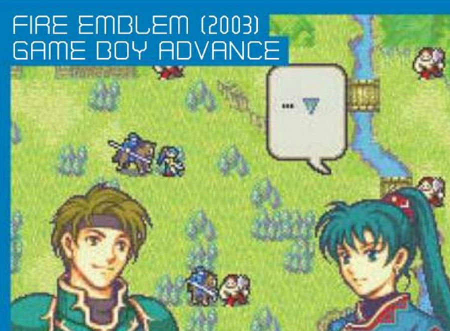
DESCRIBED BY JULIAN himself as "the kind of game I would have liked to have done if I'd had the chance" *Vandal Hearts* is a must-play for fans of the genre. Although it lacks the depth of later titles, it more than compensates with its excellent storyline, characters and soundtrack, and a playtime that doesn't outstay its welcome.

FINAL FANTASY TACTICS (1998) PLAYSTATION



THIS MASSIVE TACTICAL RPG, directed by *Tactics Ogre* alumnus Yasumi Matsuno, was the first venture into the genre for Square's franchise. The game's main strength is a remarkable scope for unit customisation via the innovative 'job' system. For an alternative, futuristic take on the genre from Square, also try the *Front Mission* series.

FIRE EMBLEM (2003) GAME BOY ADVANCE



ANOTHER OF JULIAN'S favourites, this was the first entry in the long-running Japanese tactical RPG franchise to receive a Western release. Rather than the isometric perspective of many other recent 'tactics' games, it uses a view system similar to *Advance Wars*, allowing for larger, scrolling map environments and some seriously epic battles.

JG: Immediately after I left school, I think, or at least in my final year. Once I'd got my hands on a ZX81 I realised this was the future and never looked back, apart from a minor diversion at college. Although I didn't do a lot of studying, I managed to complete two computer games while I was at college: *Chaos* and *Rebelstar*.



CHAOS (1985) ZX Spectrum

One of Julian's most enduring Spectrum titles, *Chaos* features an abstract multiplayer arena where rival necromancers fight to the last man standing in a battle of wizardry and wits. With a staggering array of spells with which to do combat, from gooey blobs to golden dragons and defensive walls, it's a remarkably complex and nuanced game for its period, and one that lives on via the indie remake scene, with the likes of the excellent *Chaos Funk*.

RG: What were the inspirations behind *Chaos*?

JG: *Chaos* was actually based on a board game I made in 1982, inspired by a game by Games Workshop called *Warlock*, which I remember some kids at school playing, although they wouldn't ever let me play it. So I thought, 'Screw them, I'll make my own magic game and it'll be better than their game anyway!' So I made this board game in 1982, and a preliminary version was programmed by Andy Greene on the BBC B. Then I decided to do an adaptation for the ZX Spectrum. It still had a lot in common with the board game, although it had some new elements – the idea of casting creatures as illusions, for example. In a way, *Chaos* is one of my favourites of all the games I've ever made. I'm not quite sure why, but it was a good, fast-playing, fun game; you could play with up to eight human players or a mixture of human and computer opponents; and it was certainly chaotic with that many people! But yes, I liked the game a lot when I was making it and playing it.

RG: What do you remember about working with Games Workshop?

JG: I wasn't the one involved in directly negotiating with them; it was mostly former Red Shift guys who had decided to do some games for Games Workshop. We actually did some adaptations of some of their board games including *Battlecars*, which I programmed the car designer for, and *Talisman*, which was done by another colleague of mine. *Chaos* was an original game, of course, although I don't think I ever told them it was inspired by *Warlock*. I think they pulled out of publishing computer games after a short while, although at one point they did want me to do a game based on their *Judge Dredd* board game. I wanted to do a strategy game where you controlled a squad of judges and sent them to crimes, with a tactical combat sequence where you dealt with the perps, but they didn't like it, and opted for some sideways-scrolling platform game with Judge Dredd on his bike, which was awful.

RG: Why do you think *Chaos* was so appealing to players?

JG: It has an interesting balance of randomness and strategy. You don't know what spells your opponents have, there's a certain amount of randomness in whether you can cast a certain spell or not, and at the same time you've got to think tactically depending on what spells you've got and what you've managed to cast. You could say it's a nice blend of tactics and chaos… I get a number of requests each year from people wanting to do a remake of *Chaos*, and I say, 'Yeah, go ahead. Not a problem.'



REBELSTAR (1986) ZX Spectrum, Amstrad CPC

Building on the success of *Rebelstar Raiders*, Julian reworked his sci-fi squad-based hit here with much larger, scrolling scenarios and greater strategic depth. New mechanics include the first appearance of 'snap shots' and 'aimed shots', RPG-esque stats for squad members such as morale and stamina, and far more interactivity with its environments. *Rebelstar* was Julian's first *Crash* Smash, receiving an admirable overall score of 93%.



REBELSTAR 2: ALIEN ENCOUNTER (1988) ZX Spectrum

Another Smash award-winning game, *Rebelstar 2* owes a certain amount of its inspiration to the *Alien* films, as the raiders land on the planet Thray 6 to eradicate the acid-spitting species that's threatening their homeworld. *Rebelstar* and *Rebelstar 2* were published on the Firebird/Silverbird budget labels and cost a mere £1.99 each, representing staggeringly good value for money in anyone's book.



» [C64] Battling a giant spider summoned by your wizard nemesis in *Lords Of Chaos*.



» [Atari ST] *Lords Of Chaos* featured a staggering variety of abilities and spell options for players to experiment with.

> "Once I'd got my hands on a ZX81 I realised this was the future and never looked back"

RG: After *Chaos* you created *Rebelstar* and *Rebelstar 2* for Firebird, which updated the turn-based tactical scenarios seen in *Rebelstar Raiders*. What do you remember about creating it?

JG: I did *Rebelstar* at college, entirely on my own. Again, it was originally just a two-player game. I took it to Telecomsoft, because they had an office in New Oxford Street, very close to where I was living in Islington. They liked it, but they said they wanted single-player, so I went back and spent a few weeks working on the single-player version. I had no idea how to do it: I had to invent a path-finding algorithm and I knew nothing about such things, so I had to come up with something from scratch. But it works. You had the single-player version on one side of the tape and the two-player version on the other side. They published it, and it sold pretty well, even though they decided to put it on their Firebird label – I was hoping they were going to put it on their more expensive label. The royalty was a pittance – I think I got ten pence a copy – but it sold tens of thousands. I can't remember the exact figures, but it did sell a lot. I bought a nice shiny red guitar and dotted around for a bit spending some money, so yeah, it was cool.

RG: How did you find the jump between programming relatively simple single-screen titles in BASIC (*Nebula* and *Rebelstar Raiders*) and the more complex, multi-scrolling *Rebelstar* games in assembly language?

JG: Pretty natural really. I didn't have too much of a problem with it. *Chaos* was the first assembly language game I did and *Rebelstar* was the second. Although I do remember debugging was something of an involved process: I often had to print out the Spectrum source code on long rolls of printer paper and go through the code line by line, which was a very reliable



* FACTS AND FIGURES

Julian's debut squad-based strategy game, **Rebelstar Raiders**, pre-dates the first turn-based tactical console title – Nintendo's *Fire Emblem* – by six years.

The original version of **Time Lords** featured alien races labelled Daleks, Autons, Zarbi and Cybermen. A second release altered the names to Kaled, Nestine, Zarby and Cyburmen…

A poll in the final issue of *Your Sinclair* rated **Chaos** the fifth best Spectrum game of all time, ahead of *Manic Miner* and *Elite*. In 2006 **games™** put *Chaos* at number 44 in its all-time top 100 games, the highest-rated Spectrum game after *Manic Miner*.

Mythos Games used the Uffington White Horse, a famous prehistoric hill-carving, as its logo.

UFO: Enemy Unknown went on to ship over a million units worldwide, an incredible feat for a turn-based strategy game.

The tutorial to 2002's **Rebelstar: Tactical Command** features an instructor named Corporal Jonlan – a nod to the hero of *Laser Squad*.

method, by the way. I was relying on dual microdrives with a small set of microdrive cartridges, which I have to say proved 100 per cent reliable through the whole development. Amazing, really.

RG: The *Rebelstar* games were your first foray into the 'squad-based tactics' genre in which you later made a big name for yourself. What attracted you to making them, and why do you think you continued to be interested in producing this style of game through to *X-COM* and *Laser Squad Nemesis*?

JG: Again, it goes back to board game roots. One I was playing called *Sniper* stands out as being quite influential. Also some miniatures games we were playing in our games group in Harlow were actually closer to *Rebelstar Raiders* and *Rebelstar*. The tactical decisions in the game, like whether to use a quick snap shot or higher AP aimed shot are interesting, as they require the player to make decisions which sometimes might be obvious, or sometimes might be a fine balance between risk and reward.

> "I got a pittance on Rebelstar – 10p a copy – but it sold tens of thousands"



LASER SQUAD (1988) ZX Spectrum/ C64/Various

Arguably the most influential of Julian's games, *Laser Squad* was certainly his most polished and accomplished title up to this point, and a culmination of the work that had gone before with the *Rebelstar* trilogy. The stylish visuals, improved weapon inventory system and impressive combat AI were all hints of what was to come in *X-COM*, and the game was universally praised by the press across its many platforms.

RG: *Laser Squad* is generally seen as your 'classic' 8-bit era squad tactics game. What improvements or changes did you try to make to the already successful *Rebelstar* formula for that game?

JG: One of the main things was to create a scenario-based system where we had multiple scenarios because we wanted to release expansion kits to add some configurations to your squad, so you got to choose weapons and arms before going into battle, improve the AI, and have something of a continuous story. We introduced a line-of-sight system in *Laser Squad*, so you had hidden movement of the enemies, according to line-of-sight rules, which *Rebelstar* didn't have. It was a number of innovations, really. I was keen on innovating and exploring the basic turn-based tactical combat system.

My brother Nick joined me at this point, and we set up Target Games. We did so many versions of this game

» [Spectrum] Corporal Jonlan infiltrates the Omni Corporation moon base in *Laser Squad*.





» [BBC] *Islandia* generated its island playfield randomly at the start of each game.



» [Spectrum] *Nebula* had a split-screen configuration.

– Spectrum, Commodore 64, Amstrad CPC. We did separate disk-based versions of all these, and there was a PC version by Krisalis Software, who also did the Amiga version. So it was a major step up, I guess. I got most of the Spectrum version done and Nick was working on the Commodore 64 version – the Amstrad version used the Spectrum code because it was the same processor, of course. The Commodore 64 version was a bit trickier because the hardware was a lot more complicated.

RG: Your games always seemed to achieve a level of critical acclaim in publications like *Crash* and *Sinclair User* that must have pleased you at the time. Was the critical response satisfying or a good source of motivation to create better and more complex games?

JG: It was very inspiring, I guess because I was doing stuff nobody else was really doing, which helped. I was making games I wanted to play. It was important to me that the games would be something I would be actually interested in playing at the end of making them, so I was pleased that other people liked the games as well. You could say I was pleasantly surprised.



LORDS OF CHAOS (1990) ZX Spectrum/ C64/Various

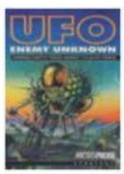
An unlikely hybrid of *Laser Squad* and *Chaos*, and the first release by the Gollop brothers' Mythos Games, *Lords Of Chaos* takes those warring wizards and massive spell inventories and plonks them in an expansive, RPG-style turn-based setting. To say this is a sophisticated game for its time is something of an understatement, but the lack of immediate accessibility means this cult classic might be best appreciated by fans of the original *Chaos*.

RG: *Lords Of Chaos* was possibly your most complex game up until that point, from a design point of view. How did you set about updating the core ideas behind *Chaos* for this game?

JG: I'd set up Target Games with a friend of mine. He left, so me and Nick decided we would create a new name for the company – Mythos Games. It was just the two of us, so I was still programming and designing, of course. *Lords Of Chaos* was a bit more role-playing oriented – you had a sort of wizard creator and you chose spell levels and basic characteristics. The idea was as you played through the mission scenarios you gained experience points and improved your character. The problem with *Lords Of Chaos* was that it was a much slower, more time-consuming game compared to *Chaos*, so the immediate fun factor was a little bit lost. It was better as a single-player game. We actually created maps that could be multiplayer and specific missions that were single-player only, which had much more puzzle-like elements to them.

It had some neat ideas: you could buff up your creatures with potions to increase their attack, defence and speed, and there were other useful ones like invisibility potions, for example. You could have creatures riding other creatures, such as horses and gryphons, and had flying creatures and ground-based ones. Each spell had eight levels so a level one spell would summon one creature, but if you had a level eight gold dragon spell you could summon up eight gold dragons and your opponent would probably be quaking in their boots! Although having said that, the mana cost would probably have been prohibitively expensive…

As a multiplayer game it probably didn't work so well. Because of the hidden movement system, you weren't supposed to see what the other players were doing. I remember playing four-player games of *Lords Of Chaos*… it took hours. You had to be very patient.



UFO: Enemy Unknown (1994) PC/Amiga/ PlayStation

The most famous of Julian's projects outside the UK, *UFO: Enemy Unknown* is a must-play classic of the genre. Marrying squad-based combat with a detailed strategic overworld, the game sees players taking on the role of the X-COM organisation, tracking alien craft via an impressive 3D global scanner, developing bases of operation and researching captured alien technology to harness against a mysterious and growing extraterrestrial threat.

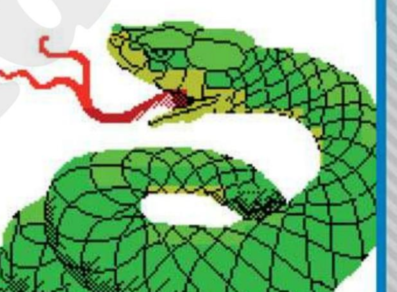
RG: *UFO: Enemy Unknown* began life as *Laser Squad 2*, so what prompted the change in setting and what were the influences behind it?

JG: Well, at the beginning it was still just Nick and myself. We were working on a very basic demo of *Laser Squad 2* – it had isometric graphics and the environments were correctly 3D modelled so your shots could go up and down, or left and right. But it was still just a two-player tactical combat system. We decided once we had this demo that we needed to find a better publisher. We had a few candidates: one was Domark, another was MicroProse. MicroProse was the company we really wanted to publish the game, because of *Civilization* and *Railroad Tycoon* – to us they were really the premier publisher of strategy games in the world at the time.

We took the demo to MicroProse in Chipping Sodbury, and showed it to a guy called Pete Moreland [MicroProse's head of development]. He showed it to a bunch of other people there – fortunately enough people at MicroProse were familiar with *Laser Squad* – and Pete came back and said to me and Nick that he liked it, but he wanted a 'bigger' game. I had to ask him exactly what he meant, and it turned out he wanted something a bit more epic in terms of scale and scope, like *Civilization*, rather than just short tactical skirmishes.

I thought, well, yes we could do that. In fact it was a very good idea. He even suggested the theme of UFOs. I went away and thought about it, did some research on UFOs, and the more I looked at it the more I thought this was cool. I remember going out and buying a video tape of the old Gerry Anderson *UFO* TV series, and the thing that inspired me from that was the idea of having a worldwide organisation that was set up to stop this alien menace. But I wanted it to be a bit more firmly rooted in UFO mythology. The other thing that was influential was a book by Bob Lazar, where he describes his experience of working on recovered UFOs in Area 51, and how the US government were allegedly trying to reverse-engineer captured flying saucer technology. That, of course, was a major influence on the whole cycle of shooting down UFOs, investigating crash sites and capturing alien technology in *X-COM*.

Pete liked our ideas, so we did a very rough design document – about 12 pages long, which was the longest I'd ever done at the time – and started





work on the project. Nick and I were doing the design and programming, and we had two artists assigned from MicroProse working on the game, so basically it was just four of us. John Broomhall did the music for us, in the last two months.

RG: And, of course, the game was your big break into the profitable PC market…

JG: It was a much bigger project than we had done before in terms of scope and ambition. It was seriously ambitious. We knew we had to move onto the PC, particularly for the American market. I remember MicroProse asked us if we could program PC games, and we replied, 'Yes, of course,' even though we'd never actually programmed anything on the PC at that point! The actual demo of *Laser Squad 2* was done on the Atari ST; believe it or not, we had originally programmed *Lords Of Chaos* on the ST as well – we'd given up, of course, on the 8-bit machines at this stage. But the PC was the main games platform in the US, and it was becoming that way in most of Europe, so we clearly wanted to develop for it. We also programmed an Amiga version; Nick did the conversion, but it was quite tough because the Amiga wasn't quite as fast as PCs were becoming at that time.

RG: *UFO: Enemy Unknown* was far and away your biggest selling title. Did its popularity surprise you?

JG: Well yes, it was phenomenally successful, and my career has gone downhill ever since! [laughs] I'm still staggered at the number of people who have played this game. When I moved to Bulgaria a few years ago I was astounded – most colleagues have played it, and I get endless requests from Russian magazines for interviews, so it was hugely popular in Russia, even though I probably never saw any royalties from these countries! And, of course, it was very popular in the US.

RG: Why do you think it proved to be so popular with the games-playing public?

JG: There were some fortunate coincidences. The first series of *The X-Files* had aired in America in '94, just before the game had released. PC strategy games were quite a significant genre in those days, and I suppose the game as a whole had this expansive scope to it – we had this interplay between strategic and tactical missions. Although the tactical missions are pseudo-randomly generated, it did fulfil the objective we'd been given, which was to make a 'big' game. When you look at some of its parts they don't seem to add up to much, but when you put it all together it creates a very interesting multi-level game where what you do at the micro level has an impact at the strategic level, and in turn at the tactical level. So when you're on tactical missions you are thinking about which aliens or weapons you can get for research, and on a strategic level you are thinking about fighting terror sites in one part of the world and maintaining relationships with governments in others. For me it's almost like an ideal game design in that sense.

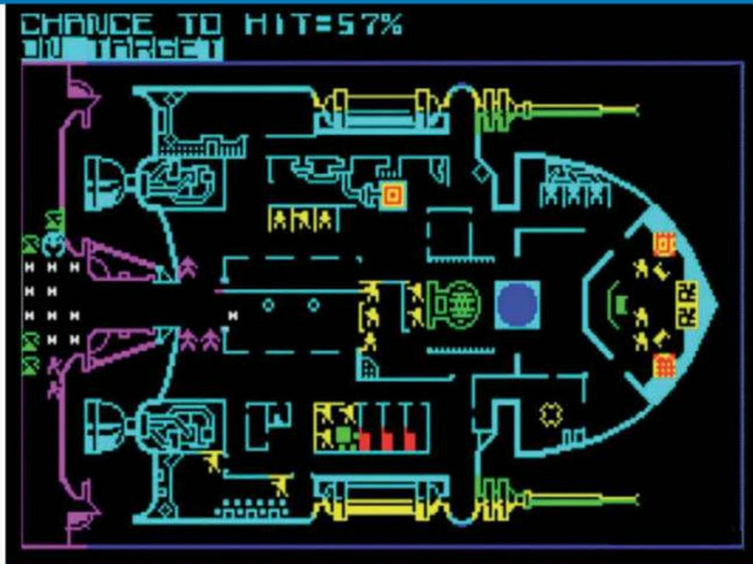
In some respects we were forced down that route because we simply couldn't create a vast amount of content with just a handful of people, so we had to leverage what we could out of the game system. As a MicroProse game I think it fit quite well into their catalogue at the time.



X-COM: Terror From The Deep (1995) PC/Amiga/ PlayStation

Despite being the direct sequel to *UFO: Enemy Unknown*, this title features very little of Julian's direct involvement, as he reveals. It's an interesting curio, however, for fans, turning the original UFO theme on its head with an even more far-fetched underwater premise. We suspect that MicroProse's in-house development team had been watching too much of *The Abyss*…

RG: Were you satisfied with *X-COM: Terror From The Deep* given that MicroProse gave you



» [Spectrum] The blueprint-style layout of the Starlingale, one of three scenarios from *Rebelstar Raiders*.



» [Spectrum] *Rebelstar 2*. The raiders' attempts to reach the alien fortress are hampered by watery stuff and swamp rats…



» [Spectrum] With eight duelling wizards, each summoning an array of mythical creatures, *Chaos* lived up to its name.

*GOOD PRESS /BAD PRESS



"Aside from the naff packaging, *Laser Squad* is one of the best games I have ever played. It's a one or two-player tactical warfare simulation with great graphics, sound, playability and hookability to boot. One-player it's great, two-player it's unbeatable." **Tony Dillon, Computer & Video Games (97% Overall)**

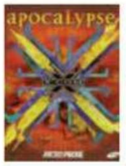


"Because of the sheer […] choice of games on the Amiga market you never really go back to them for a play unless […] a game is exceptionally good. *UFO: Enemy Unknown* is one I'll go back to again and again." **Steve McGill, Amiga Format (90% Overall)**

"The marriage of *X-COM: Apocalypse* to your computer might not be the stuff of silver wedding anniversaries. Certainly, folks in attendance may find themselves less enamoured if they've already played its older brother. Truth be told, it even makes a lousy one night stand." **Computer Games Magazine**

such a short development period to create a sequel?

JG: Well, they dragged their heels about it for some bizarre reason, I don't know why. Eventually they agreed to do a sequel, and they wanted us to do it in six months. We said, 'Well, we can't really do anything meaningful in six months except just do new graphics and locations for the existing game.' They were quite insistent about it so we said, 'Okay, why don't you take our code and do the sequel in six months, and we'll work on the third game and spend longer about it.' So we actually didn't have much involvement at all with the first sequel. Needless to say they took 12 months instead of six, even though their team size was massive compared to ours. I didn't really play it that much, to be honest. The graphics were quite impressive, but I think they made a mistake trying to expand the scope of the game by making the missions bigger and longer.



X-COM: Apocalypse (1997) PC

Apocalypse was an interesting, if not wholly successful, experiment in re-inventing the *X-COM* formula for developer Mythos. In this instalment the overworld is reduced to a single city, Mega-Primus, which players must strive to protect from an alien menace. Controversially for fans, it includes a real-time combat engine alongside its traditional turn-based system, the first such instance in any of Julian's games.

RG: *X-COM: Apocalypse* marked the last time you had personal involvement with the series. Why did you decide to go for a *SimCity*-style environment over the world map of the previous games?

JG: Basically we didn't really want to do another *X-COM* game at the time, because after three years working on the game we wanted to do something different, which was, of course, very silly of us because we should have really capitalised on what we had. The original idea for *Apocalypse* was somewhat going back to the *Judge Dredd* concept I had many years before, which was having a city that was a living, breathing entity with different factions and corporations with economic relationships to each other, and populated by traffic and people moving around. So we took that idea and put it in the *X-COM* universe, but this time the story was about multi-dimensional beings attacking the city. In retrospect it was entirely the wrong way to go,



» [PC] *UFO: Enemy Unknown*'s 'Geoscape' is vitally important for tracking UFO incursions into Earth's atmosphere.

> "I'm still staggered at the number of people who have played X-COM"

but nonetheless it was an interesting game with a number of innovations.

RG: What do you remember of the development process for *Apocalypse*, and do you think the game lived up to the high standards and expectations of fans of *UFO: Enemy Unknown*?

JG: We tried to expand the team, so we had level designers contracted in, mostly friends or friends of friends, so it didn't work quite so well as a development process. The artwork was done by MicroProse, but we had many frictions with them because we didn't like the art they were doing, and in fact it still didn't end up looking very nice in my opinion. Apart from the guy who designed the vehicles, who did a very good job – the aliens, city and buildings didn't look that good.

It was our first attempt at doing a real-time combat system. In fact, we were extravagantly ambitious in providing both a real-time and turn-based version – something that didn't quite work – and the game was probably over-complicated in many respects, and was a real pain to play. The thing that probably caused the most headaches was that the maps had multiple levels, which were somewhat confusing. So we kind of made some mistakes with that game, although it still sold well and was profitable.

RG: Do you have any regrets about your subsequent sale of the *X-COM* property to MicroProse?

JG: Well we didn't really have much of an option because the actual intellectual property rights were somewhat ambiguous. Our lawyers told us that if it came to a court battle MicroProse would probably win; their lawyers were clearly telling them that if it came to a court battle, we would win. They wanted us to do a deal where we would sign over any rights that we might have in return for some cash plus a high royalty on *X-COM: Apocalypse*. They more or less insisted on it, otherwise they were threatening to cancel the *Apocalypse* project, so there was a lot of bluff involved. We thought we may as well do it and afterwards, go and find some other publisher.

I do remember going to E3 in 1999 and MicroProse had a huge display for *X-COM: Alliance*, with giant tubes with alien foetuses and guys dressed up as aliens walking around, but when I went up to try and play the game they didn't really have anything playable. They were clearly having problems getting the engine to work properly. It was a squad-based game, four people in each squad, and it looked good, but it was kind of a tragic demo in a way – the playability wasn't there. It was later cancelled, of course.







» [PC] The isometric cityscape of *X-COM: Apocalypse*.

> “Valkyria Chronicles has an eerily similar system to what we had with Dreamland”



MAGIC & MAYHEM (1998) PC

The final release under the Mythos banner is an ambitious, story-driven real-time strategy game. Assuming the role of wannabe magician's apprentice Cornelius, players traverse three lands, gathering mana and magical elements and creating summon spells with which to do battle with rival wizards and hostile creatures. The game includes an enjoyable multiplayer skirmish mode that plays like an updated, real-time pseudo-3D *Chaos*.

RG: With *Magic & Mayhem* you updated some of the ideas and themes from *Chaos* and *Lords Of Chaos* for a contemporary audience. How successful do you think you were with bringing those ideas to PC gamers?

JG: The idea was to take some concepts from the original *Chaos*, with a wizard casting spells and summoning lots of creatures, and make a real-time strategy role-playing game. It was partially successful, and we had some arguments with Virgin about the role-playing aspect. We wanted to make it a little bit more involved, but they kept telling us that role-playing games didn't sell. *Baldur's Gate* hadn't yet come out when we had this argument…

We wanted something much more RPG-oriented where you had a number of characters with more involved attributes and equipment, while they wanted more focus on real-time strategy. But I think the basic system was very good. The multiplayer mode worked very well, in fact, and I enjoyed playing it. The single-player game was a bit less successful – it was our first real attempt at more sophisticated level design, the AI of your companions wasn't good, and it had a number of frustrations for the player. It was designed first as a multiplayer game and we sort of retrofitted the single-player experience, so it didn't work so well unfortunately, for me.

RG: What can you tell us about the cancelled *The Dreamland Chronicles: Freedom Ridge* project for Virgin, which was rumoured, in spirit, to be a full 3D version of your original *X-COM* game?

JG: Yes, it was designed as a sort of remake of *X-COM* for PC and PlayStation 2, and it was looking very promising actually. We were using a lot of new technology, including the Havok physics engine, which was very new at that stage. At the time we were one of the very few companies that were using it. It was quite an ambitious project – the closest thing I can relate it to is probably *Valkyria Chronicles* on the PS3. We had a third-person camera view behind your character with a bar representing your Action Points, which went down as you moved. When you went into shooting mode it went into a first-person view and you could select snap shots or aimed shots, which altered the size of an aiming circle on screen. So you did the shooting from that view, and went back to the third-person view to move your characters. In fact, when I first played *Valkyria Chronicles* it was quite eerie because it was a very similar system to what we had with *Dreamland*.



We also had an interesting destructible terrain system with lots of physics, so you could blow holes in buildings with a rocket launcher and see all the brickwork fly around, then move through the gaps, it was quite advanced for its time. Unfortunately Virgin got taken over by Interplay, who in turn got taken over by Titus Interactive. Titus had no interest in what we were doing – they were only after Interplay's assets, and they cancelled the project. But because we had a four-game deal with Virgin and had only done one game for them – *Magic & Mayhem* – we had no choice but to wind up the company at that point.



» Julian's brother Nick collaborated on many projects including *Laser Squad*, *Lords Of Chaos* and the *X-COM* games.

RG: You revisited two of your old franchises with *Laser Squad Nemesis* for the PC and *Rebelstar: Tactical Command* for the Game Boy Advance. Did you enjoy going back to your roots with these games and updating them for modern audiences?

JG: Well we wanted to wind back the scale. *Laser Squad Nemesis* was done by myself, Nick and another ex-colleague from Mythos. We programmed the first version in a year, and the game is still going. It started as a play-by-email system, and we later added a simple web-based interface, which gives you a list of the games you're currently playing and allows you to download turns. It was important that it was a sort of asynchronous turn-based/real-time game and I think it worked quite well. *Rebelstar: Tactical Command* was a game that just me and Nick worked on, which came about via a contact we had with Namco, who were thinking about setting up a studio in the UK. That didn't happen, but it turned out that they had a spare slot for a GBA game and asked if we could fill it, so we said yes. It was quite tough because we had to produce the game in eight months, and we'd never worked on the GBA before. It had some rather awkward and unique challenges, and because it was just myself and Nick we had to find people to do artwork, but what we managed to do in eight months was not bad actually.

RG: Well, *Rebelstar: Tactical Command* does actually have the look and feel of a Japanese tactical RPG like *Final Fantasy Tactics* or *Disgaea*, which is interesting. It's almost like you've come full circle in a genre that you helped pioneer and was then taken up so successfully by Japanese developers…

JG: Yes, I guess so. In fact I'd pursued RPG elements in games like *Lords Of Chaos* and *Magic & Mayhem*, and maybe could have pushed them a little further, so the GBA project was a nice opportunity to do a more tactical RPG, which



LASER SQUAD NEMESIS (2002) PC

After Mythos Games disbanded following *Magic & Mayhem*, Julian and brother Nick returned to their roots with this reboot of *Laser Squad*, released via the web on their newly formed Codo Technologies label. It's an incredibly polished product, refining the combat engine of *X-COM* with new features such as the ability to rewind turns and switch between turn-based tactical and real-time play at any point in the game.



REBELSTAR: TACTICAL COMMAND (2005) GBA

The Gollop brothers' final collaborative project, *Rebelstar: Tactical Command* is a worthy addition to the GBA strategy game catalogue, and a welcome nod to Julian's early budget Spectrum classics. It's a plot-driven tactical role-playing game perhaps closer in spirit to Japanese titles like *Final Fantasy Tactics*, while successfully evoking elements of the *X-COM* franchise with its alien invasion storyline.



» Detail from the original box art for *UFO: Enemy Unknown.*

was cool. And I can reveal that I am currently working on a new tactical RPG for the Nintendo 3DS, the new Nintendo machine.

RG: Sounds great! Spill the beans, Julian. What's the new game, then?

JG: Well the title's not fully decided yet, but it's a tactical RPG based on the *Ghost Recon* universe. Gameplay-wise it's going to be a turn-based tactical combat game with some similarities to *Advance Wars* or *Fire Emblem*, but obviously with a lot of original ideas from us and the *Ghost Recon* universe. Me working on it isn't actually a secret – it's just that I haven't actually told anyone else yet…

RG: We were going to ask if we'd ever see another tactical strategy game from you, so that answers the question nicely. How did this all come about?

JG: I started working as a game designer at Ubisoft in Sofia in November 2006. I quickly became a producer, then sometime in late 2007 I pitched the idea of doing an *X-COM*-style game using one of Ubisoft's franchises. They said they had a *Tom Clancy's Ghost Recon* game due out that year so I said, 'Okay, we'll do a '*Ghost Recon Tactics*'.' It was originally going to be for the DS, but last year we decided to try and get it approved for the new Nintendo handheld, which we didn't know much about at the time. We got the dev kits relatively early, so we're currently on the final stages of finishing the game, so it should be out in Europe early next year.

RG: What other strategy games have you admired or been inspired by over the years?

JG: Most of the recent stuff that's inspired me has all been Japanese. I remember playing *Vandal Hearts* on the PlayStation and thinking, 'Wow, this is the kind of game I would have liked to have done if I'd had the chance.' I enjoyed *Final Fantasy Tactics*, *Advance Wars* and *Fire Emblem* on the Game Boy Advance. In fact, when I came across *Advance Wars* back in 2001 I was amazed that anybody could make a turn-based strategy game in this day and age, so kudos to Nintendo for doing it so successfully.

RG: *Advance Wars* reminded us of *History Line 1914-18* on the Amiga. Did you ever play that? Great game…

JG: No, but I did play *Battle Isle*, which I think was similar…

RG: When you look back at your games, are there any that you're particularly fond or proud of?

JG: Well, *X-COM* – the original, of course – and probably *Laser Squad Nemesis*. I've enjoyed playing that immensely with many people.

RG: Lastly, have you enjoyed working with Nick over the years? Any sibling squabbles, or has it always been a case of brotherly love with the odd digital alien autopsy to be coded by the morning?

JG: [laughs] Well he has always been pretty good. He's a very good programmer, and is obviously familiar with the kind of games I'm interested in. So by and large I'd say we've worked together pretty well.

* THE READERS ON GOLLOP'S GAMES

What's your favourite Julian Gollop game? Our readers share their memories



Jdanddiet "*Chaos* just edges it… closely followed by all the others."



psj3809 "*Rebelstar I* and *II*. Superb strategy games and amazing for only £1.99! First strategy games I really liked."



Nreive "I'm going to have to stick with my all-time fave game *Laser Squad*. Julian Gollop took his previous efforts to an all-new level and it played great on all the main gaming platforms at the time. A superb sci-fi strategy game – the expansion packs were great fun too."



thevulture "Damn tricky one, but for most hours absorbed by it, *UFO: Enemy Unknown*. The pinnacle of what had gone before it – *Rebelstar*, *Laser Squad*, etc. Bet the forthcoming reboot is not a patch on this timeless classic."



Morkin "I'd have to go for *Rebelstar Tactical Command*. Great game indeed."



Matt_B "I'll have to go for *UFO* for adding a superb strategic element alongside the tactical combat of the other games. *Chaos* deserves an honourable mention for being the most social of all Spectrum games, though. It was definitely the game to go for when you had more than one friend round."





HalcyonDaze00 "*Laser Squad* vs *UFO: Enemy Unknown* is a very tough choice so I will sit on the fence and say *Laser Squad* for two-player game and *UFO: Enemy Unknown* for single-player… but I voted for *UFO*."



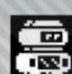
necronom "*UFO: Enemy Unknown*. It's one of the best games I ever bought on the Amiga. I also bought *Laser Squad*, which was very good as well. I don't know if I realised at the time that both were designed by the same person."



batman877 "*Laser Squad* for me. It was amazing on every platform it was released for. A true classic."



Thulsadoom "I used to play *Chaos* and *Rebelstar* for hours. Absolutely brilliant games! I had to narrowly vote for *Rebelstar*, due to its large environment and that it always felt like tactics were more involved. However, *Chaos* was always superb when you got a few family members banded together and had a face-off, firing all those spells at each other! Gooey blob, anyone?"



Stickhead "*Lords Of Chaos*. It's *Chaos* but with an exploration/adventuring element – what's not to love? Come on, add it to the poll. It's got harpies and everything."





Thanks to Nuno Barros at **www.chaosquad.mediacorporation.net** for his kind assistance during the creation of this article.

» YOUR ESSENTIAL GUIDE TO FORGOTTEN GAME SYSTEMS

OBSCURA MACHINA

#2 Fujitsu FM Towns Marty



JUST THE FACTS

The FM Towns range was named after 1964 Nobel Prize in Physics Charles Hard Townes. The 'e' was dropped because in Japanese, Townes is pronounced 'Tau-Ness'.

The joystick port on the Marty is a DB9 connector – the same as the one seen on the Amiga, Sega Master System and Sega Mega Drive.

Many believed that the Marty 2 contained superior hardware, including a 486 processor. However, recent work by enthusiasts has proven that the machine is essentially a Marty MK1 in a different coloured case.

A mouse was released for the Marty that allowed for greater control over the many PC-style adventures available on the format.

The Marty cannot output in RGB. Unless your television is capable of accepting an S-Video connection, you're out of luck.

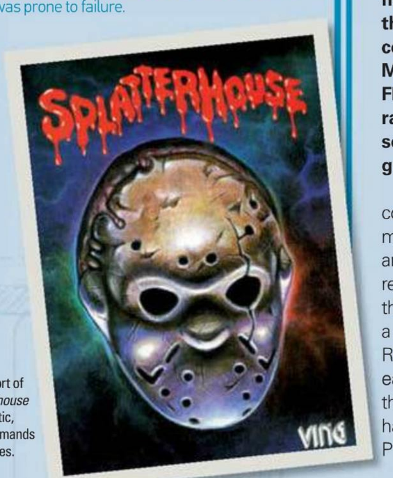
Some Marty titles – like *Splatterhouse* – offered the ability to run the game in different resolutions.

CSK Research Institute supported the FM Towns with conversions of Sega's arcade hits such as *After Burner* and *Galaxy Force*. The former is backwards compatible with the Marty.

UK studio Psygnosis was another big FM Towns supporter, and released *Shadow Of The Beast*, *Microcosm* and *Scavenger 4* (aka *Novastorm*) on the system.

The abject failure of both the Marty and Marty 2 apparently led to the creation of the Japanese business term 'Marty's Law', which states that if you don't keep offering something to sell, you can't boost sales. Obvious, really.

The super-rare Car Marty came in two variants: the MVP-1 (April 1994) and MVP-10 (November 1994). The latter was apparently produced because the drive in the former was prone to failure.



» Ving's port of *Splatterhouse* is fantastic, and commands high prices.

Japanese PC manufacturer Fujitsu isn't a company you'd necessarily associate with innovation in the videogame industry, so it might come as some surprise to learn that this firm is responsible for launching the world's first ever 32-bit console. That machine was the Marty, an off-shoot of Fujitsu's FM Towns personal computer range and one of the most sought-after pieces of Japanese gaming hardware in the world.

"The original FM Towns computer was based around a modified Cyrix 80386SX 32-bit CPU and was released in February 1989," reveals expert Eric Chung. "It was the first Japanese PC to come with a CD-ROM drive as a standard." Right from the start, the format was earmarked for gaming greatness, thanks largely to its unique hardware. "Unlike the competing PC-98 series, the FM Towns possessed formidable (for the time) video and audio functionalities, with native sprite capabilities and with six-channel FM/8 channel PCM sound."

Released in 1993, The FM Towns Marty was supposed to capitalise on the success of the burgeoning console industry. It boasted CD-ROM technology and betrayed its home computer roots by also packing a 3.5-inch floppy drive. The Marty was advertised as being fully backwards compatible with existing FM Towns software, although this didn't turn out to be the case. "Out of the 700 or so titles released on the FM Towns, only around 250 are fully compatible with the Marty," says Chung. Despite this, the Marty was gifted with some truly amazing arcade conversions. Faithful ports of Namco's *Splatterhouse* and Toaplan shooters *Tatsujin-Ou* and *Ultimate Tiger/Twin Cobra* made the console highly desirable to coin-op addicts at a time when current hardware – such as the Mega Drive and SNES – simply wasn't up to hosting perfect conversions.

Alongside the Marty, Fujitsu also produced the Car Marty, a variant of the console intended for installation in automobiles. "At the time, it was widely lauded as being one of the first GPS systems with the ability to plot multiple routes to a destination," Chung explains. "With the use of the optional 3.5-inch floppy drive, users could save routes and other information for future searches." Astonishingly, despite this versatility, the Marty wasn't a commercial success. The first problem was the cost of the platform. "Priced initially at 99,800 yen, it was clearly above traditional game consoles, yet it lacked the functionality of its PC competitors that were priced from 100,000 yen and upwards," laments Chung. "In 1994, Fujitsu released the Marty 2, which did not contain any hardware upgrades but lowered the price down to 66,000 yen – still more than



In our continuing quest to bring you lost treasures from the vaults of retro gaming, Damien McFerran delves into the history of the world's first 32-bit CD-ROM console



the cutting-edge Sega Saturn and Sony PlayStation."

Another big problem was the functionality of the Marty, which was noticeably worse than that of its computer sibling. "Besides not being compatible with nearly two-thirds of the FM Towns software, the Marty suffered from a number of downgrades from the original hardware," continues Chung. "It contained a down-scan converter which turned the VGA output into S-video with no option for RGB. Also, the console's 386 CPU was the weakest out of the FM Towns line and the equivalent Towns PCs sold in 1993 were already equipped with 486s." Infuriatingly, the design of the Marty didn't allow for future upgrades or expandability, which caused problems as the standard of FM Towns software slowly evolved. "The console had 2MB of RAM which was not upgradable," continues Chung. "This resulted in limited software performance, and meant that later games such as Capcom's *Super Street Fighter II* – which required 4MB of memory – would not function on the Marty."

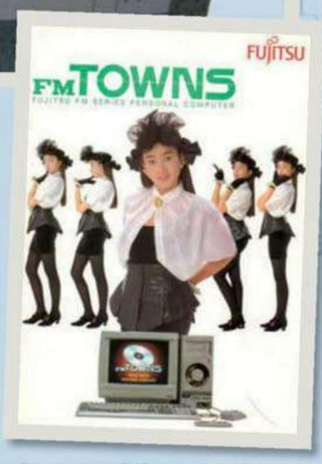
The types of games being released on the Marty also had a bearing on its overall retail performance. Although some killer coin-op conversions were available, the vast majority of titles could trace their ancestry back to Western personal computers – hardly a surprise when you consider that the architecture was PC-based.

"The majority of titles available were developed by Western houses such as Origin, LucasArts and Psygnosis, and were obviously not to Japanese tastes," says Chung. "Home developers like CSK, Ving and Capcom converted Japanese arcade titles but there were too few to capture the mainstream gaming audience. PC developer mainstays like Koei and Falcom focused on the better-selling PC-98, which led to fewer releases for the FM Towns range. Interestingly enough, Sony instructed Psygnosis to use the FM Towns as a learning ground for CD-based games and they subsequently used that knowledge on the PlayStation after dropping support for Fujitsu's machines."

These days, thanks to its relative scarcity and unique selection of games, the Marty – along with its close relation, the FM Towns – remains a solid favourite for hoarders of Japanese hardware. "The FM Towns is a tough platform to collect for as the number of copies produced for each title is already much smaller than other PC platforms, and there are few places even in Japan which carry used games," reveals Chung. "Ironically enough, the Western games that Japanese gamers didn't warm to are exactly the titles which collectors, especially those overseas, are searching for. Origin and LucasArts' titles for the platform are often the best versions available and are bilingual. For example, *Zak McKracken* uses 256 colours, is fully voiced and contains an arranged redbook soundtrack. *Ultima VI* is fully bilingual with voice acting – some by Richard Garriot himself. Due to this, Western collectors are often seeking out the FM Towns versions, which has reduced supply and driven some titles into the $300 range." If you're thinking of taking up FM Towns or Marty collecting, make sure you have the patronage of an oil baron beforehand.

» The Car Marty – also known as MVP-1 – was an early example of a GPS Sat-Nav device.





» This advert for the FM Towns computer bills it as a 'Hyper Media PC'.

PERFECT THREE



TATSUJIN-OU

■ Also known as *Truxton II*, the prequel to this game was converted to the Sega Mega Drive and PC Engine. Toaplan's shooters are always in demand with collectors, and *Tatsujin-Ou* is no exception.



SPLATTERHOUSE

■ Often hailed by many as the Marty's killer app, Ving's port of Namco's famous arcade *Splatterhouse* title is nothing short of stunning. It's also ridiculously expensive these days, too, of course.



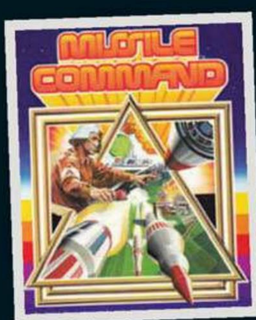
ULTIMA VI

■ *Ultima* creator Richard 'Lord British' Garriot worked closely with Fujitsu to ensure that this PC port of his game would be as authentic as possible. He even lent his voice to the game.

Thanks go to Eric Chung for taking the time to participate in this feature, and to David Coyles for making it all possible

MISSILE COMMAND

Vivid nightmares, errant missiles and living under the threat of nuclear war were just a few of the obstacles that Dave Theurer and Rich Adam faced while creating Missile Command. Darran Jones investigates further…



IN THE KNOW

- » **PUBLISHER:** ATARI
- » **DEVELOPER:** DAVE THEURER
- » **PLATFORM:** ARCADE
- » **RELEASED:** 1980
- » **GENRE:** SHOOT-'EM-UP

Dave Theurer is not an easy man to get hold of. The genius behind such arcade delights as *Tempest, I, Robot* and *Missile Command* is fiercely protective of his private life; so much so, in fact, that it's taken eight long years of gentle coercion and downright pleading for him to finally commit to an interview about one of the industry's most iconic games.

Still, when you consider the sheer pedigree of Dave's title, the long wait has definitely been worth it, with the precise controls and intense pressure the game offers remaining just as refreshing today as the first time you dropped 10 pence into it.

One of the most interesting facts about *Missile Command* is that while the gameplay mechanics are all Dave's, the concept itself actually came from higher up within Atari. "I remember my manager, Steve Calfee, told me to create a missile defence game wherein the player would defend against incoming missiles, which could be seen on a radar display," confirms Dave when we quizzed him about *Missile Command*'s origins. "We took it from there, tossed out the radar screen and added cities, missile bases and so on."

It's a somewhat inauspicious start for one of the most iconic games of the Eighties, but with the constant threat of the USSR and nuclear war being high on the agenda, it's hardly a surprise that the concept had germinated in the mind of Atari (coin-op) president Gene Lipkin.

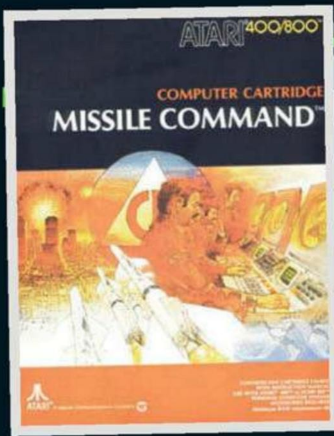
The bleak link became even more obvious when names were being thrown about for the new project, with *Missile Command* being just one of the possible choices. "Some of the names I recall included *Missile Command*, *Ground Zero*, *The End* and *Armageddon*," continues Dave. "There were various pro and con reasons given for each name suggestion, but recognition was a key concern. Lots of people don't know the meaning of 'Ground Zero' and 'Armageddon'. I don't recall being too bleak as a factor. As I recall, Gene Lipkin suggested the name *Missile Command*. There was a general consensus that that was a really good name, so we went with it."

While the concept itself had been born from the Cold War threat, Dave didn't want to use *Missile Command* as an excuse to glorify something that, at the time, was considered a very real threat. "I wanted people to become aware of the horrors of a nuclear war. I didn't want to put players in the position of nuking entire cities, as entertainment, because it would desensitise them from such horrors," he explains. "However, a defensive position was

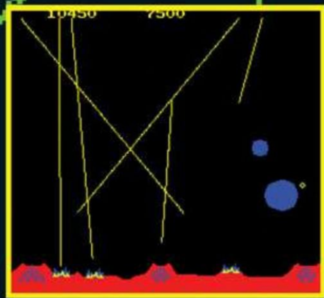








» The instruction manual for the Atari 8-bit. You just don't get artwork that looks like this anymore…



» [Arcade] Getting missiles to swerve around your explosions was one of the development challenges.

acceptable, since what's nobler than saving 10 million people from annihilation? The final lesson, though, is that nobody wins in a nuclear war, and that's why we have 'THE END' explode to fill the screen, after all the cities are gone."

It's something that Rich Adam, *Missile Command*'s junior programmer, also touched upon when we asked him about the potential controversy that *Missile Command* might have attracted at the time. "I didn't feel as strongly as Dave, but I certainly did not want to go into something that would simulate a true, aggressive World War III scenario," he begins. "We touched on it to a point, but our concept was always [that] we're blowing up pixels. It's an abstract, conceptual game. It was certainly in our collective minds, but it was not something that dissuaded us or diverted us from trying to make something fun."

Despite the general concerns that were connected to *Missile Command*, Dave, Rich and the rest of the team remained resolutely excited about the project. After all, this was the beginning of the videogame industry, and it was an incredibly exciting time for everyone involved.

"During the first few years, we felt like pioneers," recalls Dave with an obvious sense of pride. "There weren't many [video] arcade companies at the time. There weren't many game development tools either. We had to develop most of them in-house. I'm not sure we thought about it that much, though. Mostly we just thought about how we could make our games more fun to play."

It's a sentiment that Rich wholeheartedly agrees with: "It was an outstanding environment to work in and we were lucky because we were filling the void. Every idea was fresh and new and hadn't been tried before, and that was really fun. Nowadays it's very hard to come up with something novel and different."

"I didn't want to put players in the position of nuking cities as entertainment"

As with many of Atari's games, *Missile Command* was built from the ground up, meaning that Dave and the rest of the team didn't have the benefit of using an existing engine, something that is commonplace in today's industry.

"You were always bringing out new hardware in that day and age," explains Rich, "so that was one of the key difficulties faced with new projects." The constant creation of new custom-built technology also meant that there was a strong relationship between Dave and the rest of the hardware team while *Missile Command* was being created.

"The hardware designer designed the custom hardware just for this game," explains Dave about *Missile Command*'s early development. "He knew that the bottom portion of the screen needed more colours for the cities, bases, land, etc. No other game, except for a possible sequel, was planned for this hardware. The hardware designer, Dave Sherman, was excellent, and quickly came up with a design, which was wire-wrapped for development purposes."

It was at this point that we were keen to find out if any other system other than a trackball had been considered when *Missile Command* was first pitched. "My recollection is that it was going to be a trackball from the start and it never deviated from that," confirms Rich. "From the moment we implemented it, it was pretty obvious that the trackball was optimum."

"We were using trackballs in a lot of our other games at the time such as *Soccer* and *Football* before *Missile Command*," continues Dave. "It seemed like a good match, so a trackball was planned from the very beginning."

While the trackball easily made the transition from prototype to final games, other aspects of *Missile Command* weren't quite as lucky, with numerous ideas being dropped during the game's six-month development. "When I was first creating the coastline you were defending, I pathetically tried to create a Californian-looking coast that turned out to be awful-looking," recalls Rich. "Lyle [Rains] was the one who eventually came up with the fortress-looking cities that you had to defend."

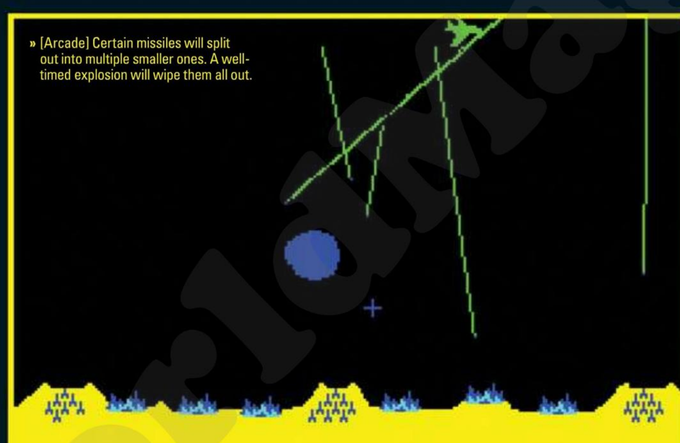
The ability to blow up real-world cities, even if they were depicted by simple pixels, was soon ditched, which in turn helped distance the game from any possible real-life connections. There were plenty of other ideas that were tested, but they

A word from Lyle Rains

WE MANAGED TO speak to Atari's former senior executive about the popularity of *Missile Command*, and here's what he told us.

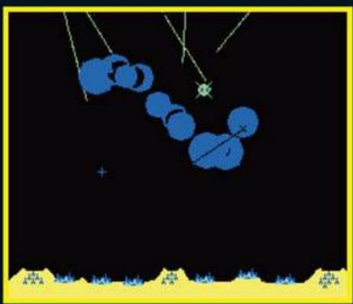
"Dave Theurer, as was also the case with *Tempest*, did a fantastic job of tuning the pacing of the game and making the controls responsive.

"Atari certainly did not shy away from battle simulations in our products, although we avoided direct bloody violence on human avatars and mobiles for about two decades. But the world in 1981 was still involved in the Cold War. The idea of nuclear holocaust on cities added an extra edginess to *Missile Command* that resonated with some folks as being a bit too close to home. One could speculate that, as part of the popular culture of the Eighties, *Missile Command* even had some subliminal influence on defence policy-makers, as they contemplated the so-called 'Star Wars' missile defence system. If they had actually played the game, they would have known that you always ending up losing."



» [Arcade] Certain missiles will split out into multiple smaller ones. A well-timed explosion will wipe them all out.

The Making Of ...
MISSILE COMMAND



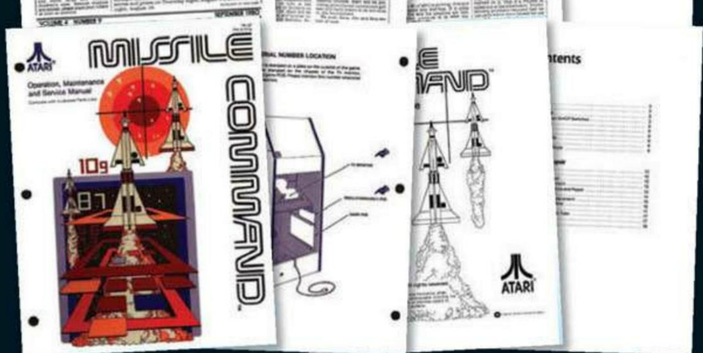




» There was assorted memorabilia created for *Missile Command*, including an album, a collector's pin and even an audiobook set.







too quickly fell by the wayside. Dave reveals some of the other ideas that were implemented and goes on to explain why they were eventually ignored: "Submarines would pop up and shoot missiles, which didn't make sense, as every other threat was coming from the sky. Railroads hauled missiles between the cities and the bases, but it [was deemed] too complicated for players. There were programmable names for the cities, which made it more relevant for players in areas near the named cities, but less relevant for players out of the area, but it was too much work for operators to program in the cities' names. There was also a giant physical display above the monitor containing flashing lights, status indicators and other elements. It was too expensive, too hard to maintain – light bulbs too hard to replace – and too hard to play the game and watch this external display."

In addition to numerous gameplay changes, *Missile Command* presented plenty of technical challenges for the developers, many of which were being encountered for the very first time. "The entire program had to fit into approximately 12K and it was written in assembly language," recalls Dave. "We also had to come up with lightning-fast methods for drawing lines and circles in real-time so that motion would be smooth, and we were constantly working within the limits of the hardware: the narrow bottom section at the bottom of the screen for land, cities and missile bases had more colours than the rest of the screen."

Rich remembers how the large number of on-screen missiles and smart bombs that the game had to handle also ended up proving to be a problem for the trailblazing pioneers: "Dealing with the new hardware and making sure that it was up and running and good to go was hard enough, but in terms of development, creative and fun factor it was probably those smart bombs." He continues: "It was just their behaviour. I think a lot of what they did was targeted to a specific city, but they avoided and tried to go around and would use colour detect in their near region to decide if they were going to plough into a bomb or an explosion area. In that day and age we were trailblazing, but in today's world they are now trivial problems. Getting them to do the right thing and behave intelligently had less to do with time on screen and more to do with the avoidance of getting blown up."

Despite various kinks, Rich feels that the creation of *Missile Command* remained a fairly organic experience for the most part. "We did the original incoming missiles and that was cool but not enough, and so we added the satellites and the planes

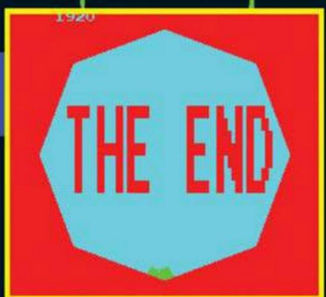


» [Arcade] The trackball was essential to mastery of *Missile Command*. A joystick would never allow you to deflect speeding incoming missiles on later stages.





» Dave kindly supplied us with this image of the original top that was considered for *Missile Command*. The expense and maintenance of the lights coupled with the distraction it caused meant it was quickly dropped from the final game.



» [Arcade] Dave was keen that *Missile Command* didn't glorify nuclear war, using the end screen to explain that, in such a circumstance, everyone loses.

and the things that dropped them. That was more and better but maybe not quite enough, and so we added MIRV missiles, and that was more and better but not quite enough, and then we added smart bombs and that turned out to be enough. And that's really the kind of evolution of how games are created. You take the core of what you're doing, you make that and see if it fits. It was such a simple concept, and the additions that we made were so simple, that it became one of those games were everything kind of fell into place."

With a prototype finished, it was time to put *Missile Command* on its all-important field test. This was a crucial time for any new game, as the amount of coinage that was pulled in would always decide if there was any point in finishing the project. Even before the field test, though, Dave was convinced that they had a hit on their hands: "I'd be asking co-workers to step back from playing the development prototype so I could work on it," he recalls. "That's when we knew that the game would be a winner."

Rich was also pleased with the field test, and, like Dave, he was convinced that they stood a far better chance than other games. "You have to realise that this was one of the first colour games, so it had this gigantic advantage over all its competition," he begins. "I remember some young guy who was probably in the military. He was looking at the game and he had simplified technology into thinking that everything was simply a new chip. He had this unabashed excitement and enthusiasm and was like, 'Oh, man. Look what's in that new chip!' His reaction on test was basically saying: 'Look what technology is bringing to me.'"

"Dave Theurer suffered from regular nightmares about nuclear attack for several months"

After its successful field test, *Missile Command* rolled out into arcades, quickly going on to become a massive success for Atari; although the game's gruelling schedule did leave its mark on Dave, who suffered from regular nightmares about nuclear attack for several months during and after the game's development. Despite those nightmares, Dave remains incredibly proud of his work on the game. "I had a very strong feeling from the very first day when Steve Calfee gave me the assignment to do a missile defence game that the game would be one people would want to play," he admits. "We saw co-workers' excitement when it when they came into the lab to play it during development. We had developers from the Atari VCS system that would drop by – they were in the same building – and play it for hours in our lab. We saw the players' excitement when we put it out on its first field test. We saw great collections in all the field tests. It was a very positive experience from start to finish."

Rich is also pleased with the way the game turned out, citing the power it gave you as one of the reasons for its enduring success. "It's a good feeling to have total control over an incredibly complex machine," he explains. "To have a machine give you that ego gratification of controlling such a complex piece of equipment for a quarter is a hell of a bargain. People crave power and ego is fed by that, so that's what we were selling and, to a degree, what videogames continue to sell."

Special thanks to Dave Theurer and Rich Adam for their precious time, Martin Goldberg for additional advice and pictures, and to Paul Drury for making an eight-year quest finally come to fruition.

Incoming missiles. Abort, abort

MISSILE COMMAND WAS a huge success for Atari, so it should come as no surprise to learn that a sequel was soon in development after the original's runaway success. Having cut his teeth on the original game, it was Rich's turn to shine as the game's creator. Unfortunately for him, the original sequel hit a number of key issues, meaning it never reached the arcades, a pity, as his description of it fills us with excitement at what might have been.

"It was simultaneously two player," he begins about the now long-dead sequel. "We turned the monitor on its side and tried to get a two-player version of the game up and running, where you attacked each other. It was a really challenging concept, but it just wasn't as fun to multitask – at least I couldn't get it to be fun – and try and go over and launch accurate missiles at opponents, while playing defensively against launches from another player.

"I think the main issue with *Missile Command 2* was that the computer launches could be way more efficient and rapid about laying down missile launches, as opposed to humans who had to manipulate the trackball. In that sense it was difficult, and people were so satisfied with the way that the mechanic of *Missile Command* worked that it just didn't do much. I never solved the design for using two players simultaneously, and I just could not make it fun. The screen real estate was another issue, as you actually had a smaller, narrower area to defend. That was my game and we eventually killed it because it just didn't earn. When you started a project you knew that there was a 50 per cent chance that it was never going to get to production. It was a really competitive environment, though, and I wanted to make something really cool. I wanted to have the next big hit game for us."

Sadly, with *Missile Command 2*, it just wasn't to be.

Future Classic

Modern games you'll still be playing in years to come



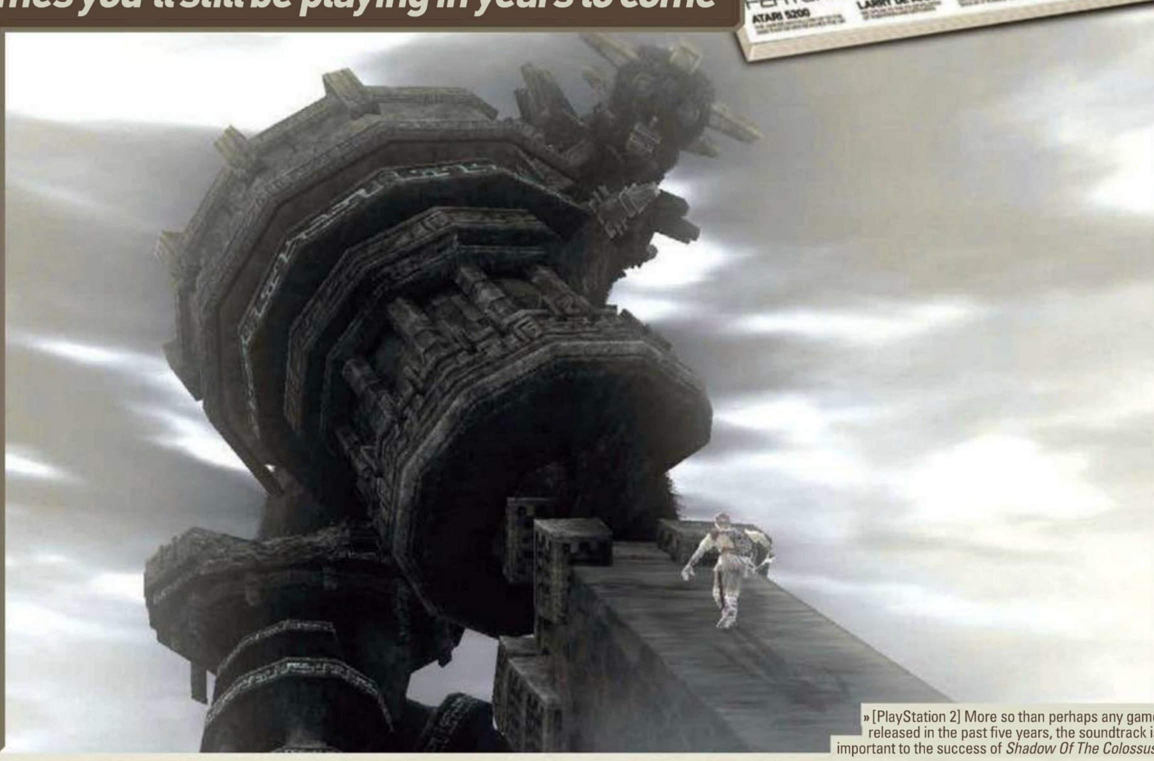


INFO

- » **Featured System:** PlayStation 2
- » **Year Released:** 2006
- » **Publisher:** Sony
- » **Developer:** SCEJ/Team Ico
- » **Key People:** Fumito Ueda (Game Design) Kenji Kaido (Producer) Kow Otani (Music)
- » **Buy it for:** £20+

GO DEEPER

- » **Members of the dev team went out and rode horses to get a feel for it, before animating Agro.**
- » **Beta footage of the game showed Colossi that didn't make the final cut, such as a spider creature.**



» [PlayStation 2] More so than perhaps any game released in the past five years, the soundtrack is important to the success of *Shadow Of The Colossus*.

01. SHADOW OF THE COLOSSUS

Frequently cited as evidence of games' evolution into an art form, Shadow Of The Colossus was one of the most evocative and technologically impressive titles to hit the PS2

THE BACKGROUND

Like *Ico* before it, which started life on the PSone before mercifully jumping platforms, *Shadow Of The Colossus* spent a long time in the conceptual stages before release. Designer Fumito Ueda wanted to create a unique world so strange in its construction that it would defy any particular time or place. Likewise, the Colossi, arguably the stars of the game, were designed using both natural and mechanical source materials, so players would be unable to discern whether they were animals or machines.

Shadow Of The Colossus defies any specific genre but can be summed up in its structure as 16 boss fights, divided by long stretches of exploration around a desolate land. The game's first public showing came in the form of 'Nico', presenting the game as a very different experience, involving multiple protagonists attacking a Colossus as a group – other aspects, such as the specifics of the hero, Wander, came later, yet the idea of a protagonist and his horse companion existed before the setting did.

Ueda aimed to make each Colossus more than a mere boss battle, however. While he perceived nothing wrong with this traditional design idea, *Shadow Of The Colossus* would be as much about the journey as the fight itself, with the environments designed to create a sense of foreboding as the players discover the Colossi for the first time. *Ico* had built a dedicated audience in the meantime. *Shadow Of The Colossus* was released to greater sales than its predecessor, not to mention a rightfully positive reception from critics.

THE GAME

Shadow Of The Colossus is about the guilt. The unbearable, crushing guilt. As Wander, a man seeking to bring his love back to life by slaying 16 mystical creatures, the entire story of the game is presented through the prism of the character's selfishness – you, as a player, feel as though you're doing something terrible by robbing this fascinating land of its mighty native creatures, and that theme is explored so

Things of note



Returning soon

Announced at TGS, *Shadow Of The Colossus* will return on PS3 next year in a bundle with *Ico*, including HD graphics and Trophies. No titles from the PS2 era are more worthy of such elaborate treatment.



Shared universe

Ico and *Shadow* share a universe, but this is something that only becomes clear once players reach the end of the game. A clever twist explains why Ico was persecuted by the kingdom's people.



Reign Over Me

This Adam Sandler movie featured a large presence from *Shadow Of The Colossus*, as Sandler's character uses the game to come to terms with his overwhelming grief following the death of members from his family.



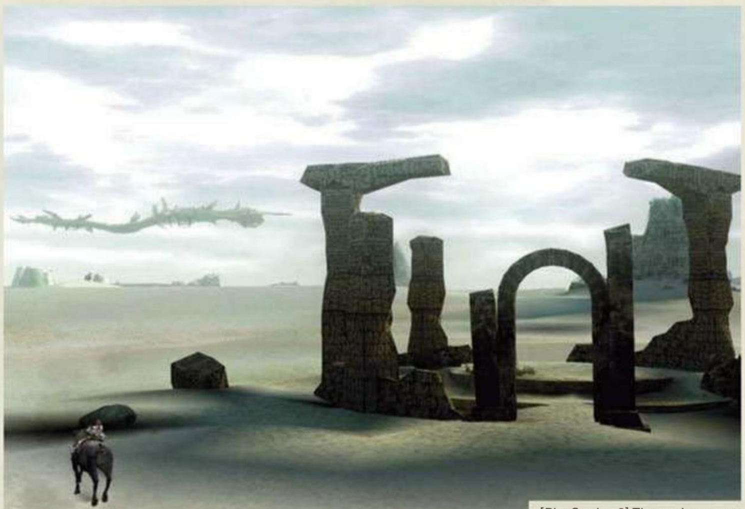
Hard to find

Like *Ico*, *Shadow Of The Colossus* quickly became an elusive presence at retail, due to the lack of a Platinum rerelease and the fact that each edition of the game came in a cardboard slipcase.



Size matters

Some of the enemies here are bigger than any seen before in a game – such scale adds to the wonder of seeing the Colossi for the first time and creates a real sense of high stakes before the battle begins.



» [PlayStation 2] The environments in *Shadow Of The Colossus* vary depending on the enemy.



» [PlayStation 2] Ueda's next game, *The Last Guardian*, will no doubt be as big a cult hit as *Shadow*.



What the press thought



Play
Score: 93%
"It's a magnificent game that offers one of the most original slices of gaming we can remember."



games™
Score: 9/10
"It's achingly beautiful, deeply involving and as breathtaking to watch as it is to play."

cleverly and maturely through the narrative. This is a groundbreaking display of interactive storytelling; your experience, your struggle with each staggeringly impressive beast is the story, while the mythical journey to each battle is an undoubtedly effective and ominous plot device.

The atmosphere is a triumph of art and sound design – the world here is an unending, washed-out labyrinth of echoes, diverse yet almost entirely empty, save for the Colossi, lizards, birds, shrines and a few secret curios for the more ambitious players. There's just something really unsettling about the world. You never quite feel alone – Agro, your trusty steed sees to that – but at the same time you feel lonely. It's a captivating feeling. The expedition to each Colossus, guided by the light of Wander's sword, is a perfect pacing mechanic, building up each reveal to fever pitch before you're finally aware of the challenge that lies ahead of you.

Each Colossus is a carefully crafted puzzle, and it's only through using the environment to his advantage that Wander is able to get the better of each one. The goal is to hunt out their weak spots, then find a way of safely approaching them in order to bring them down, yet it's rarely a straightforward task. The appeal is in the way they look, move and interact with the environment, which varies unexpectedly throughout – highlights include Phalanx, the mighty sand snake that floats over the environment as you try to cling onto its wings; Hydra, the aggressive sea dragon that swims deep beneath a hauntingly dark lake; and Avion, the bird-like creature that instantly transforms your expectations of the game as you try to take it out of the sky in mid-flight.



It's technically amazing, stretching the PS2 to its very limits, often at the expense of the frame rate. In an odd twist, however, the slowdown and overall jerkiness becomes part of the experience, particularly when you're in close, dangerous quarters to the Colossi – it'll certainly be interesting to see how the upcoming 60 frames-per-second HD remake will reshape this staple of the *Shadow Of The Colossus* experience.

Each time Wander jabs his sword into a creature, only for it to fall to the ground and Kow Otani's astonishing score to kick in, elicits a genuine sadness and causes you to reflect upon the protagonist's selfish merits. No other game packs the same emotional impact, or tries anything quite as thematically complex.

WHY IT'S A FUTURE CLASSIC

We love *Shadow Of The Colossus* because it makes us feel something. The art direction here is so accomplished and iconic that, no matter how much 3D graphics evolve over the coming years, the imagination on display here by Ueda and his team will endure. Each creature is an individual masterpiece, and, despite its spiralling difficulty towards the end, it's a terrific journey into the unknown that only a videogame could provide.

Comparing this to the games released at the start of the PS2's lifespan showed just how far the bestselling home console of all time came in terms of its capabilities, as its vast, seamless world was quite unlike anything in terms of technical achievement. Plus, regardless of what we may feel about destroying each of the Colossi, we all know it's cool to kill big monsters. *Shadow Of The Colossus* is an all-round triumph.



FROM THE ARCHIVES

RETRO GAMER DIGS UP THE FILES OF THE CLASSIC COMPANIES OF OLD

Virgin Games Part 2

In 1991, Virgin Mastertronic lost its MD and much of its staff to Sega. It needed a new direction, and former US Gold supremo Tim Chaney was the man to do it. Richard Hewison concludes the Virgin Games saga…

Tim Chaney joined US Gold in 1985 from Commodore, and when he left it was the biggest software publisher in Europe.

"I'd left US Gold in April 1989 feeling that my job there was done," explains Tim. "I wanted to do something new and more entrepreneurial, so I hooked up with Anton Bruehl and Manlio Allegra to form TecMagik, with the intention of publishing Sega games."

TecMagik quickly signed the rights to publish Master System conversions of popular games *Pac-Mania*, *Populous* and *Shadow Of The Beast*. The company was doing well when Virgin Mastertronic's Frank Herman approached Tim in early 1991 with the idea of him replacing the departing Nick Alexander as the next MD of Virgin Games.

"I wasn't that keen initially," admits Tim, "because it meant going back into a corporate life, even though Virgin was still considered to be cool and rock and roll." Despite his reservations, he met with Frank Herman and Virgin Communications' chairman Robert Devereux.

"I liked Robert a lot and I think he liked me," says Tim, "and they offered me the job of running Virgin Games, which had around 20 employees and a small income target of about $1 million for the next financial year."

After a few months of courting, Tim was a little reluctant to commit, and so another meeting was arranged. He travelled down from Birmingham to London for lunch in Notting Hill and remembers very clearly what Robert Devereux said when they met.

"He basically asked me, 'Are you joining us or not?'" Put on the spot, Tim had to make a decision: "I said, 'Yes I will, but I have a few things I need to do first.'" The offer was left open for six months and Virgin eventually got its man.

INSTANT EXPERT

The author of this article is listed as a KGB agent in the end credits for *KGB* (or *Conspiracy*, as it is known on CD-ROM). He also wrote the manuals for *Caesars Palace* on the Sega Game Gear, *Reach For The Skies* and *Dino Dini's Goal!*, bug-tested many other VIE games, and edited the digitised speech samples for *Broken Sword: The Shadow Of The Templars*.

The name Virgin was associated with computer games from 1983 until 2009 – a staggering run of 26 years. The company was split up a few times, and sold to a number of different owners. Richard Branson's involvement ceased in 1994, but in 2010 he returned with Virgin Gaming – an online service that allows PS3 and Xbox 360 game players to challenge each other head-to-head for cash prizes. Only time will tell if this venture is a success or not.

Industry opinion felt that had Virgin Games been left alone to its own devices without any corporate interference from American companies, it would have either completely imploded upon itself or it would be where Electronic Arts is now.

The Mirror cracked

Tim Chaney officially joined in December 1991 and had what he saw as an instant stroke of good luck, thanks to the demise of a rival publisher.

"At that time, Mirrorsoft was in the process of disintegrating," explains Tim, referring to owner Robert Maxwell's death on 5 November 1991 and the repercussions that followed. Along with a number of other businesses in the Mirror Group, Mirrorsoft was shut down in early 1992, making its employees redundant. Mirrorsoft's sales and marketing director Sean Brennan soon became Tim's first recruitment target.

"I had spoken to Tim beforehand about a possible position at Virgin," remembers Sean, "but we didn't discuss it in any meaningful way until CES in Las Vegas."

After initial discussions around the roulette tables in Tim's hotel in early January '92, Sean had an interview in London with Robert Devereux, which resulted in him clinching the post of deputy managing director for Europe.

"Sean was and still is one of the best sales and marketing guys in the business. Just look at what he's done at Bethesda!" exclaims Tim. "So we really were starting off on the right foot from day one".

Other ex-Mirrorsoft employees were soon recruited, and the Mirrorsoft



COOL SPOT



> **“We had a totally different mentality and were hell bent for glory”**

TIM CHANEY EXPLAINING HIS APPROACH TO RUNNING VIRGIN GAMES



connections also helped Virgin sign up a string of quality products in varying stages of development, including *Lure Of The Temptress*, *Reach For The Skies*, *Apocalypse*, *Cannon Fodder*, *Alien 3* and a number of Sega Master System and Mega Drive conversions. Coupled with titles already in development under the previous regime – notably *Jimmy White's Whirlwind Snooker* from Archer Maclean – they gave the company a very strong line-up.

"I wouldn't say it gave us a running start, because obviously the company had been going for many years under Nick Alexander," says Tim, "but what those people and those products allowed us to do was introduce a new wave of energy, ambition and aggression."

The result was that, within a year, Virgin Games was performing better than ever in a market that had changed due to the emergence of the 8 and 16-bit consoles.

"Instead of reaching our $1 million target by the end of our first year, we hit £13.4 million, mainly because we sold tons of Sega games," recalls Tim with justifiable pride. "Someone once said to me that the best thing that happened to Virgin was a fat bloke falling off his boat, and they weren't far wrong!"

Going for Gold

Tim Chaney's running of Virgin Games was very different from the approach that Nick Alexander had taken, but in many ways it had to be.

"We had a totally different mentality and were hell bent for glory," explains Tim. "Sean was aggressive as hell, and in those days I was still thinking that we could take over the world – and we nearly did!" he adds, laughing.

The Virgin bosses also gave Tim all the support he needed. "The few times I had to get Robert Devereux to sign off on a very expensive deal, the worst thing he ever said to me was, 'I wouldn't do it, but you do it if you want to,' which shows the faith they had in me," he says gratefully.

The next phase in Virgin Games' rebirth was instigated by a desire to make the company the best in the business.

"When you're trying to build a new company that's aggressive, you look for the largest, softest, most arrogant, lazy target, and from my perspective that was US Gold at the time," admits Tim. US Gold had just gone public in 1993, and Tim went for its developers, then cherry-picked some of the staff. And then he went after the biggest prize of all: LucasArts. US Gold had been associated with George Lucas's games division for a long time, and it took a lot of effort to sign it.

"I made a beeline for LucasArts. Sean didn't think we'd get them and I didn't know whether we would or not, but I was going to give it a go," admits Tim.

"I remember being on a flight to the States where I spent half the journey writing an eight-page proposal for the deal, ▶

BY THE NUMBERS

3 – *Dino Dini's Goal!* was *Kick Off 3* in everything but name.

11 – *The 11th Hour*, follow-up to *The 7th Guest*, was an expensive flop when it was released in 1995, inflicting a serious financial wound to Trilobyte.

20 – The approximate number of employees working at Virgin when Tim Chaney became MD in 1991.

200 – The approximate number of people working in the VIE US office when Viacom closed it down in 1998.

1,000,000 – The approximate number of copies sold of Westwood's *Blade Runner* game

4,500,000 – The estimated number of units that Virgin's adaptation of Disney's *The Lion King* sold on consoles

$10,000,000 – The size of guarantee that Virgin Interactive paid for the rights to develop *The Lion King*

$250,000,000 – How much Blockbuster paid for Virgin Interactive Entertainment in 1994



» (Left) VIE staff enjoying their work, including Diarmid Clarke, Mike Merren, Jon Norledge, Matt Spall, Peter Hickman and Sacha Anthony.



WORK HARD, PARTY HARD

Trade paper *MCV* paid tribute to VIE in 2005, asking former staff for their anecdotes.

"Virgin was a brilliant place to work," said Louise Gaynor.

"It was like riding a motorbike without a helmet," explained Rob McGrath, and Matt Spall revealed: "There are bars in Kensington where old employees are still recognised, and probably still barred!"

Did VIE really enjoy themselves that much? Sean Brennan remembers "too much partying", while Mike Merren says: "If there was one weakness it was that we didn't evolve from that party mentality as the industry became more professional."

which I wish I could find now because it was a bloody masterpiece!" he chuckles. His hard work and persistence paid off, because Virgin ultimately became LucasArts' new European distributor.

The advantages of getting it was obvious. "You get a massive profile and some great products when you work with LucasArts," explains Tim. The deal included the *Star Wars* PC games *X-Wing* and *TIE Fighter*, *Dark Forces*, *Rebel Assault II*, and a number of other triple-A titles spread across a range of formats. "I think it also enticed Simon Jeffrey to leave EA and work for us, and he was a game-changer," adds Tim.

Others were also attracted to the bold and brash new-look Virgin Games, including the 3D racing simulation expert Papyrus, GT Interactive, Maxis, Hudsonsoft, Capcom and JVC.

"We had 13 consecutive campaigns banned by the Advertising Standards Authority"

TIM CHANEY REVELS IN VIE'S NOTORIOUS ADVERTISING CAMPAIGNS

"In Europe we had this substantial bolt-on distribution business," explains Tim. "We were the number one distributor in Germany, and in the top two for France and the UK. When you look for distribution you look for a company that will treat you fairly, that has decent terms, flexibility, and someone who has huge power at retail, and that's what we had."

The 7th Guest

Virgin Games' US office was set up by Mastertronic co-founder Martin Alper in 1986, initially to distribute Commodore 64 games, but its role in Virgin Games' emergence as a real force was due in part to a curiously titled CD-ROM game.

"What our American office did was publish *The 7th Guest*, which was one of the first truly interactive CD-ROM games," says Tim. Former Virgin Games US employees Graeme Devine and Rob Landeros set up their own studio, Trilobyte, specifically so that they could develop *The 7th Guest* for Virgin to publish. The game was set in a spooky mansion and featured digitised video footage intermixed with rendered graphics. The gameplay was based around exploration and solving logic puzzles.

"It really was groundbreaking at the time," explains Tim. "I remember even Richard [Branson] coming down to my office to be photographed with the box."

Virgin held a huge press launch for the game in the UK, and its PR executive Caroline Stokes recalls the launch: "We chose a fantastic, lived-in mansion called the Manor House in Hertfordshire to host the event. It was stunning and completely in keeping with the game." Some of the attendees were flown in by helicopter, while others were driven to the venue. They were then placed in different parts of the mansion to have pre-dinner drinks and a meal.

"Hired actors played out the 'experiential' part of the event, which was to solve a puzzle in a similar way to the game, with ghosts, ghouls and dead people scattered around," continues Caroline. "The guests had to hunt for clues around the mansion, going to the attic, the stables, the kitchens and so on. Guests who thought it was a private affair soon bumped into more guests from other parts of the house, and it was a real hoot."

The end of the launch culminated in copies of the game being presented to the guests. "We were told by many of the

TIMELINE

- 1991 – TIM CHANEY JOINS VIRGIN GAMES IN DECEMBER AS THE NEW MD
- 1992 – NEW RECRUITS AND PRODUCTS FROM THE REMAINS OF MIRRORSOFT SIGN UP WITH VIRGIN
- 1992 – TIM CHANEY SIGNS WITH LUCASARTS FOR EUROPEAN SALES AND DISTRIBUTION RIGHTS
- 1992 – VIRGIN GAMES BUYS WESTWOOD ASSOCIATES AND RENAMES IT WESTWOOD STUDIOS
- 1993 – TIM CHANEY SIGNS EUROPEAN DISTRIBUTION RIGHTS TO *DOOM II* AT E3 SHOW
- 1993 – VIRGIN GAMES RELEASES *THE 7TH GUEST* AND *DUNE* ON CD-ROM
- 1993 – WESTWOOD STUDIOS' *DUNE II* IS RELEASED
- 1993 – VIRGIN GAMES RENAMES TO VIRGIN INTERACTIVE ENTERTAINMENT
- 1994 – VIE IS SOLD TO BLOCKBUSTER FOR $250 MILLION
- 1994 – VIE BECOMES PART OF VIACOM AFTER VIACOM BUYS BLOCKBUSTER
- 1995 – WESTWOOD STUDIOS' *COMMAND & CONQUER* RELEASED
- 1996 – REVOLUTION SOFTWARE'S *BROKEN SWORD: THE SHADOW OF THE TEMPLARS* RELEASED
- 1996 – VIRGIN IN TROUBLE WITH THE ASA AGAIN FOR ITS *SCREAMER 2* ADVERTISING CAMPAIGN
- 1998 – VIACOM SELLS WESTWOOD STUDIOS TO ELECTRONIC ARTS
- 1998 – TIM CHANEY AND MARK DYNE NEGOTIATE AN MBO FROM VIACOM
- 1999 – INTERPLAY EUROPE AND VIE EUROPE MERGE IN FEBRUARY
- 1999 – VIE IS BOUGHT BY TITUS IN DECEMBER

people that it was the best event they'd ever attended," remembers Caroline.

The 7th Guest was considered a huge gamble at the time, as CD-ROM was very expensive to develop for and PC CD-ROM drives weren't that common and typically cost £200-300 to buy. However, the gamble paid off, resulting in sales of over 2 million copies for the IBM PC. Virgin also licensed the game to Philips for release on the CD-i console.

The sleeper awakens

Virgin struck up working relationships with a number of developers to encourage CD-ROM development. This included signing French team Cryo Interactive to produce a game based on Frank Herbert's epic science-fiction novel, *Dune*.

Dune was primarily a graphic adventure, with a few strategic elements. Initially released on floppy disk for the PC and Amiga, it was spruced up and released on CD-ROM the following year, with footage from David Lynch's 1984 movie, new graphics sequences and in-game speech.

It was a success, and Cryo went on to produce an original graphic adventure called *KGB* in the same year. Set in Moscow in August 1991, the player assumed the role of a KGB agent assigned to investigate the murder of a former agent turned private detective. As with *Dune*, *KGB* was also given additional material for CD-ROM, featuring footage of Canadian actor Donald Sutherland – complete with dodgy Russian accent – offering advice to the player in the role of the protagonist's dead father. However, by the time the CD-ROM version was ready to be released, it had undergone a change of name, as Tim explains: "Although we were very happy to fly in the face of controversy in Europe, the US office wouldn't release the game with the title *KGB*, so they renamed it *Conspiracy*."

Cryo went on to develop one further CD-ROM graphic adventure for Virgin in 1995. *Lost Eden* was a typically offbeat game, set in a mythical world with humans and talking dinosaurs.

The final step in Virgin Games' early transformation was the change of name from Virgin Games to Virgin Interactive Entertainment, shortened by many to VIE.

- **2002** TIM CHANEY NEGOTIATES AN MBO FROM TITUS FOR VIE SPAIN IN MAY, RENAMED TO VIRGIN PLAY
- **2003** TITUS AND VIE REBRAND AS AVALON INTERACTIVE
- **2005** AVALON INTERACTIVE CLOSES DOWN
- **2008** TIM CHANEY LEAVES VIRGIN PLAY AFTER BUSINESS DIFFERENCES WITH PRIVATE INVESTORS
- **2009** VIRGIN PLAY GOES INTO LIQUIDATION

WHERE ARE THEY NOW?


Caroline Stokes

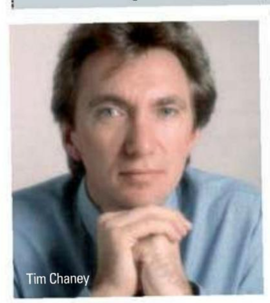

Richard Branson

Tim Chaney
Tim Chaney started as a sales manager at Commodore UK in 1982 and then joined US Gold in 1985. Four years later he set up Sega publisher TecMagik, before being enticed to become MD at Virgin Games in late 1991. Several owners and a change of company name later, Tim engineered an MBO from Viacom in 1998, and merged with Interplay Europe. Another MBO resulted in Virgin Interactive Spain becoming Virgin Play. Tim left Virgin Play to set up Zattikka in 2009 with Yahoo Europe CEO Mark Opzoomer, producing social networking games, mobile games and internet games. Tim is also planning to have his autobiography, *Luton Boy*, published in 2011.

Sean Brennan
Sean worked for Telecomsoft and Mirrorsoft before arriving at Virgin Games in 1992. After leaving in 1998, Sean joined Interplay Europe before returning to VIE when the companies merged in 1999. After Titus bought Interplay and VIE, Sean went to Interactive Media Partners and then set up Europlay Capital Advisers with Mark Dyne. He was then CEO at Blast Entertainment, and is currently managing director at Bethesda Europe, publisher of *Fallout 3*.

Caroline Stokes
Caroline went from VIE to Sony in 1994 to work on the launch of the original PlayStation console in Europe. Today she works for Natural Selection, a company that headhunts talent in digital media, including games and social media online.

Richard Branson
Richard Branson launched Virgin Games in January 1983 after Nick Alexander's suggestion. In 1991 a sizeable chunk of Virgin Mastertronic was sold to Sega Europe. The remainder of the company was eventually sold to Blockbuster for $250 million in July 1994. In summer 2010, Richard Branson announced a return to games with a new company called Virgin Gaming.


Tim Chaney


Sean Brennan

Tim remembers the thinking behind the decision: "The change in name was made to position the company for the CD-ROM business explosion, which was interactive. There was nothing wrong with the Games brand, but the word 'game' was considered a bit lowbrow – unlike today – and it was a bit too Eighties!"

Rubbing the lamp

VIE's strong performance in the US with *The 7th Guest* opened many doors across the Atlantic, including the chance to work with the software division at Disney on the official videogames for *Aladdin*, *The Lion King* and *The Jungle Book*.

Aladdin featured animation drawn by the actual Disney artists and used a technique called Digicell, which compressed the animation frames so they would fit into the relatively small space allocated to the Mega Drive's game cartridge.

The finished product was a hugely enjoyable platform game that won a string of awards, was bundled with the Mega Drive console, and generated over $100 million in revenue for VIE. That last fact persuaded *Aladdin* programmer David Perry to leave Virgin's US office and set up his own development company, Shiny Entertainment, so he could get more of the financial rewards, developing properties like *Earthworm Jim* and *MDK*.

Associating with Westwood

Las Vegas-based developer Westwood Associates was founded by Brett Sperry and Louis Castle in 1985. The company





» [Mega Drive] Programmer David Perry remembers McDonald's asking where the hamburgers were in joint venture *Mick And Mack: Global Gladiators*.

“Richard Branson is always one for knowing when to sell”

TIM CHANEY EXPLAINING WHY VIE WAS SOLD TO BLOCKBUSTER IN 1994

made an impression with the first two *Eye Of The Beholder* RPGs for SSI, and in the early Nineties it began working for Virgin Games on *Dune II*, which was a real-time strategy game.

VIE was so impressed with Westwood that it sought to buy the company. It had a rival bidder in Sierra, but the appeal of the Virgin brand and the fact that the co-founders retained a slice of the business swung the decision in VIE's favour. The name changed to Westwood Studios, and it then enjoyed its most productive and successful period, releasing the *Legend Of Kyrandia* graphic adventures, the *Lands Of Lore* RPGs, and the ultimate real-time action strategy series: *Command & Conquer*.

Westwood and Virgin also produced successful console titles including *Young Merlin* and Disney's *The Lion King*, which was written in a tight seven months for the Sega Mega Drive and the Super Nintendo. Development on *The Lion King* was fraught with tight deadlines and late changes to the movie, which was developed in parallel with the game. As with Virgin's previous Disney release, the Mega Drive version was bundled with the console upon release, and it sold over 4 million copies worldwide.

Westwood didn't stop there. It developed *Monopoly* for the PC, a Windows port of Capcom's hugely successful *Resident Evil*, and in 1997 it worked on one final graphic adventure for VIE. Based in the same world as the classic sci-fi movie, Westwood's *Blade Runner* game was played in real-time, adding new characters to the universe. It was a critical and financial success and proved to be a key title in VIE's armoury. The European advert for *Blade Runner* showed a prostrate replicant and the words: ‘I had to get this guy out of my hair, my fingernails, my carpet…’ The advert caused a fair amount of controversy, something that VIE was already used to.

Offal PR

Virgin's aggressive advertising for some of its releases often got it in the news headlines for the wrong reasons.



» [PC] Christopher Lloyd in *Toonstruck*, doing an audition for *I'm A Celebrity… Get Me Out Of Here.*



» The European distribution rights for *Doom II* proved to be a coup for Virgin in its new VIE guise.

“We weren't scared of anybody and didn't care what people thought of what we did,” remarks Tim. An early example of VIE's approach to advertising can be found when it distributed *Doom II* for GTI and id Software in Europe.

“Because we were wacky Virgin, we got away with delivering Jiffy Bags of offal to computer magazine editors to promote *Doom II*,” says Tim with a grin. “Although one editor was a vegan and turned up at our Ladbroke Grove office, so I introduced him to Sean and left them to it!”

Later examples of VIE's brand of PR included the ‘Best High Scores’ campaign for *Command & Conquer*, which caused a minor international incident when Jacques Chirac was shown alongside Hitler, Mussolini, Saddam Hussein and many others on billboard posters advertising the new game.

“Someone had to put a huge white sticker over Chirac's face after complaints were received from the French embassy,” explains Tim. Virgin also used a photo of Hitler addressing the Nuremberg Rally in an advert saying, ‘Thanks a million’ when *Command & Conquer* sold a million copies. “That upset the Jewish community a tad,” reflects Tim.

VIE's advert for Capcom's first *Resident Evil* game featured a bath full of real blood spilling over onto a white-tiled floor, and a large 48-sheet poster version adorned VIE's new offices in Kensington Square for a while in 1996.

That same year, the Minister for Road Safety complained to the Advertising Standards Authority after seeing a poster for VIE's racing game, *Screamer 2*, which showed a teenage joyrider while saying: ‘Speed's the buzz. Smash anything that gets in your way.’ The minister alleged that the advert glamorised joyriding, and

SIX OF THE BEST



Dune II (Westwood Studios)
An outstanding and frenetic real-time strategy game set in Frank Herbert's incredible novels. Westwood hit upon the basics of a gaming system that sowed the seeds for something much bigger just a few years later.



Broken Sword: The Shadow Of The Templars (Revolution Software)
Revolution started with *Lure Of The Temptress*, advanced to *Beneath A Steel Sky* and then started hitting the home runs with *Broken Sword*.



Lands Of Lore: The Throne Of Chaos (Westwood Studios)
The first *Lands Of Lore* was a gorgeous RPG, with huge maps, challenging monsters, tricky puzzles and, on the CD-ROM version, some serious voice acting talent thanks to Patrick Stewart.



TIE Fighter (LucasArts)
VIE distributed this throughout Europe. Although *X-Wing* was brilliant, it was also very hard. *TIE Fighter* was a little easier, and it featured better graphics than its predecessor. Fighting for the Empire had never been as engrossing as this before.



Command & Conquer (Westwood Studios)
C&C launched with 160,000 pre-orders in the UK and sailed past 1 million in no time. An improved interface over *Dune II* and some terrific strategy action ensured *C&C* a place in gaming history.

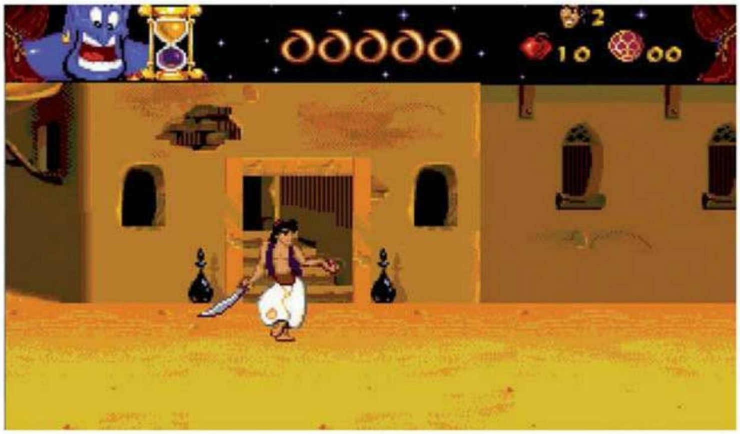


Screamer 2 (Milestone)
The sequel to *Screamer* upped the stakes regarding the graphics, and it had a nice split-screen option. Sound effects were good, the courses spread across different countries, and the deep controls made this a surprisingly good PC racing game.



» [PC] *Indy Car Racing II* from Papyrus was just one of many high-quality PC games distributed by VIE in Europe.

» [Mega Drive] *Aladdin* was a huge hit for VIE and Disney Software across a wide variety of formats, including the PC.



» Viacom's multi-billionaire owner Sumner Redstone (right) with Tim Chaney at E3 1996.



the campaign was pulled two and a half weeks later.

"We had 13 consecutive campaigns banned by the Advertising Standards Authority, and then everyone else tried to emulate what we were doing," laughs Tim. Sean Brennan also remembers that he spent a lot of his time at Virgin "inventing new ways to annoy the ASA".

VIE published *Street Fighter EX* for the Sony PlayStation in late 1997, and the poster campaign for Capcom's fighting game encouraged people to shout out 'northern gits' or 'southern poofs' depending on which part of the country they were in.

Once again, the ASA received complaints, particularly from the 'pink press', as VIE's Danielle Woodyatt recalls: "That particular advert pissed a lot of people off!" Danielle also remembers another advert that made a few people squirm: "The *Worms World Party* poster campaign showed a worm being removed from someone's backside on an operating table." Lovely!



Spelling test

By 1994, VIE Europe had grown from a business only expected to make $1 million in 1991 to a company rapidly heading for an estimated $150 million, and this made Virgin's management sit up and take notice once again.

"Richard Branson is always one for knowing when to sell," explains Tim, "and he saw our success as an opportunity to make some pretty decent money." The Virgin Group and the VIE management then got the business into shape for a proposed initial public offering (IPO) in the US, turning it into a publicly traded company.

"What we did was put out a 'red herring', which wasn't the prospectus for a public offering but was, if you like, the beta version of that document that people could have prior access to," remembers Tim. "Following that, we had Hasbro and Blockbuster knocking on the door. Hasbro moved fast, and were willing to put in a small investment of around $20 million. Then Blockbuster came along and wanted the whole thing, valuing the business at $250 million."

VIE was sold to Blockbuster in July 1994. What this meant for Hasbro was that it held its newly acquired stock for just a couple of months and then, incredibly, doubled its investment.

"Blockbuster was huge and had a load of money at the time," recalls Tim, "and I think it was CD-ROM and Disney that made us attractive. This was back when CD-ROM was supposed to take over as the new media from music and film."

VIE was put under the wing of Spelling Entertainment, which was part-owned by Blockbuster. Aaron Spelling made hit TV shows in the US, including *Charlie's Angels*, *Starsky & Hutch* and *Dynasty*, "so we reported to a bunch of guys in Hollywood," says Tim, wryly. However, it wasn't long before Blockbuster was itself bought by media giant Viacom.

Viacom woes

Being part of Viacom wasn't a happy experience for VIE. The company had plenty of solid products and maintained a high number of releases across all the popular formats – including the emerging Sony PlayStation console – but it soon became obvious that it didn't really have a strategic fit with its new owner. It spent more and more of Viacom's money and quickly fell out of favour. Having already had its fingers burnt with Viacom New Media – its attempt to enter the videogames market that failed, costing the company $100 million in the process – the owners became less enamoured with VIE as the months rolled by.

"Gradually more and more Viacom people were eased into our ranks," remembers Tim. "They completely ran the US office in no time at all, but Europe remained a problem for them."



The ace in Tim's pocket in Europe was his close relationship with Capcom, which had provided VIE with the distribution rights to the very successful *Resident Evil* series.



POPPY CONTROVERSY

Sensible Software's *Cannon Fodder* found itself in hot water with a national newspaper, MPs and the Royal British Legion following its intention to use the image of a poppy. The game was previewed at a computer show in 1993, and this led to some severe criticism, which forced Virgin to remove the poppy image from the box art, although it remained on the loading screen with a disclaimer saying that it was not in any way endorsed by the Royal British Legion.

Despite Virgin's tendency to court controversy, Tim Chaney decided to get the offending box artwork amended. At the time he was quoted as saying: "In the cold light of day, I don't want to upset anybody, especially the people that this could upset."

Sensible Software co-founder Jon Hare recalls the incident very clearly: "The Royal British Legion told us that it was offensive to the war dead to use it in a game. They obviously didn't play the game to see the context within which it was used. They also told the *Daily Star*, and they then asked us to give them £500. We felt this was a kind of threat, but we paid them the money and they never mentioned it again."

THREE TO AVOID



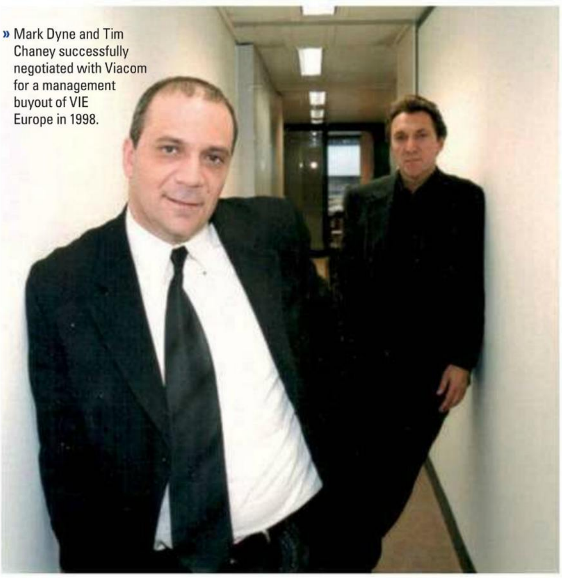
Toonstruck (VIE US)
It probably sounded like a great idea on paper. A *Roger Rabbit*-style animated cartoon point-and-click adventure game with a 'real' central character played by Christopher Lloyd. It's really a shame that, with a $10 million budget, VIE forgot to put a game in there worth playing.



Iron Assault (Graffiti)
Nick-named '*Iron Insult*' by the upper echelons at VIE, this *MechWarrior* wannabe from Graffiti for the PC started badly with a cringeworthy stop-motion animation intro and cheesy voiceover. Once in the game proper, things didn't really improve.



The Pagemaster (Probe)
Remember that kid from *Home Alone*? He starred in a fantasy movie in the early Nineties called *The Pagemaster*, with Christopher Lloyd. Ah, him again. Probe coded this SNES game for Fox Interactive, which VIE distributed in Europe, but it was let down by poor controls.



» Mark Dyne and Tim Chaney successfully negotiated with Viacom for a management buyout of VIE Europe in 1998.



» [Mega Drive] Probe's *Alien 3* landed at Virgin Games after Mirrorsoft fell into administration.

"More and more Viacom people were eased into our ranks. They ran the US office in no time at all"

TIM CHANEY ON THE BEGINNING OF THE END

"They couldn't sell the European business without Capcom being on board because that relationship was a huge money maker, while most of the US product – with the obvious exception of Westwood's *Command & Conquer* – was losing money," says Tim.

The turning point for Tim and VIE came at a Viacom senior management meeting in Los Angeles where all of Viacom's companies, including Paramount, Blockbuster and VIE, presented their business plans for 1998.

"Our plan called for $90 million more cash. Viacom owner Sumner Redstone said to me, 'Good luck with your plan,' as we left the room, but I'm sure that once we were out of earshot he was saying, 'Get rid of them.'"

The end result was that Tim, Martin Alper, Brett Sperry and COO Tom Allen spent the next 16 months on and off looking for a buyer, talking to MicroProse, Electronic Arts and GTI. They came close to a deal with GTI, but it fell through at the last minute.

"Our problem was that we were a real oddball compared to everybody else," explains Tim. "All of the major companies in the business at the time had 75 per cent of their revenues from the US and 25 per cent from Europe, and we were the reverse. We had this potent European distribution business and a weakening American office that had something like 200 people working in development, bellowing cash on products that weren't making any money."

Producer Mike Merren, who had originally joined VIE in 1992 from the ashes of Mirrorsoft, found the situation unsettling: "There was a heck of a lot of turmoil at the company. It was up for sale, individual projects were also up for sale, and nobody really knew what was going to happen next."

Sean Brennan got so fed up with dealing with Viacom that he left VIE in 1998 to join his ex-boss Peter Bilotta at Interplay Europe. Even the external developers felt disenchanted with the American owners, as Charles Cecil of Revolution Software recalls: "No reflection on the UK people, but once Viacom got involved it all became quite nasty."

All change again

Having failed to find a buyer for the whole business, Viacom decided to sell VIE's greatest single asset, Westwood Studios, to Electronic Arts, depriving VIE of one of its major revenue streams. Due to the precarious situation VIE found itself in with Viacom, LucasArts also felt that it had no choice but to move on, signing a multi-territory publishing and distribution partnership with Activision.

"That left us with a US business with no product, which Viacom razed to the ground in less than a week," elaborates Tim, "and a European side with its substantial distribution business, which had been deprived of 50 per cent of its publishing revenue."

Without Westwood and LucasArts, the European business was no longer in any fit state to stand on its own. Tim had to act and act fast, so he brought in friend and business associate Mark Dyne to

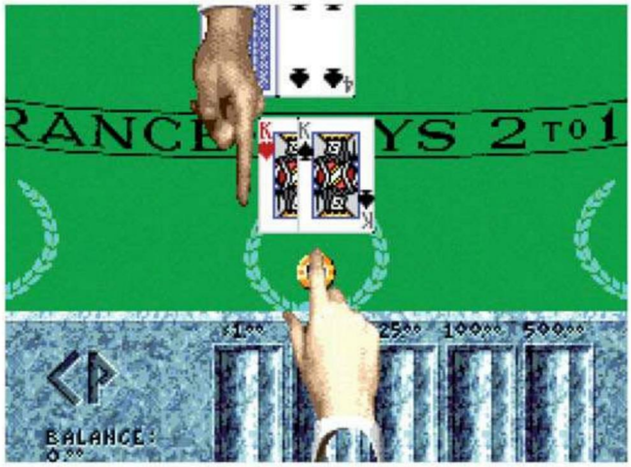
» [PC] Cryo's *Dune* adventure strategy game was spruced up for the CD-ROM release to include video and rendered flights over Arrakis.



» [PC] *Doom II* would have been distributed by US Gold, but VIE bagged the rights at the very death.



» [SNES] The *Caesars Palace* games were hits for Virgin across a number of platforms.



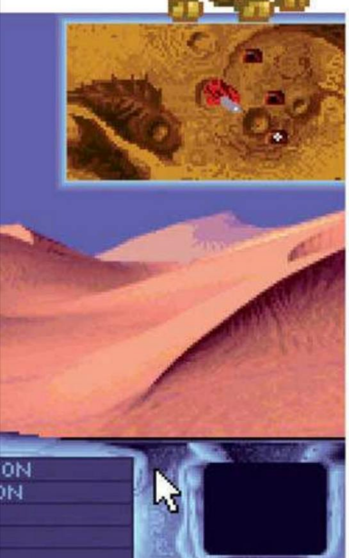
DOOMED TOO!

VIE signed up the European distribution rights to *Doom II* in literally the final hour of E3 in 1993, stealing it from under the nose of US Gold. Tim Chaney learnt that GTI and US Gold had agreed on a deal, and decided to act fast.

"I heard about it one hour before the end of the show from an agent. I asked him if he could get me in front of GTI now! He did, and I offered GTI a much better royalty rate than US Gold had, and we shook on it. Geoff Brown believed he left E3 with *Doom II*. By the time he landed back in the UK he found out that he hadn't!"

VIE did such a good job of selling *Doom II* in Europe that GTI decided to have a bigger say and set up its own UK office. "That wasn't the first time that happened in my career," reflects Tim.





successfully help repackage the company and negotiate a management buyout from Viacom. Mark subsequently became CEO at VIE until late 1999.

"It was a strange, heady and sometimes scary one, because Viacom actually paid us $15 million, which we reinvested as new capital, to take it away!" recounts Tim. "We signed a piece of paper completely indemnifying Viacom from any past or future responsibilities, then within three months we merged VIE with Interplay".

Interplay's European business and VIE worked well together. VIE needed more product and Interplay needed the distribution side of the business, so the two companies shared a common purpose and gelled quite quickly. By coincidence, Sean Brennan was working at Interplay and so Sean and Tim were reunited one last time, working alongside Peter Bilotta in the new company.

"People said that our egos would clash and Peter and I wouldn't last a month as co-presidents, but we played to our strengths and it all worked out fine," remembers Tim.

"That first year we turned a small profit around from a loss," he remembers, "and then in late '99 Titus came in to buy us after buying control of Interplay in the summer." As before, things were not particularly smooth for VIE during this latest uncertain period.

"Titus basically didn't do very thorough due diligence," explains Tim. "They didn't realise that Interplay and VIE were locked in for seven years, so they had to buy us too because we had the golden share, owning 50.1 per cent of the company."

Tim's opinion of Titus and how it handled buying Interplay and VIE remains mixed: "I liked the Caen brothers who owned Titus, but they were full of themselves and they really believed that they could do no wrong. Once they took over, my responsibilities were marginalised to the point where I didn't really care any more."



Peter Bilotta soon left, as did Sean Brennan, and VIE was starting to disintegrate. By then, Tim was living in Spain and working in the Madrid office. He had got married to a local Spanish girl and was starting a family. He was still on the Titus payroll, but he freely admits that he wasn't working very hard.

When Tim was asked to reduce the staffing levels by 25 per cent he refused, then came back with a counter offer to buy Virgin Spain outright by swapping the 'golden parachute' payment he would have received had he left. Titus agreed, and Tim and colleague Francisco Encinas ended up owning VIE Spain, which they renamed Virgin Play.

The company remained a distributor until 2006. "That was when we started moving into publishing because I found distribution tedious!" laughs Tim. The portfolio was expanded, signing up Real Madrid and *Pocoyo*, lining up Barcelona, and negotiating with the Spanish national football team for an official game in time for the 2010 FIFA World Cup.

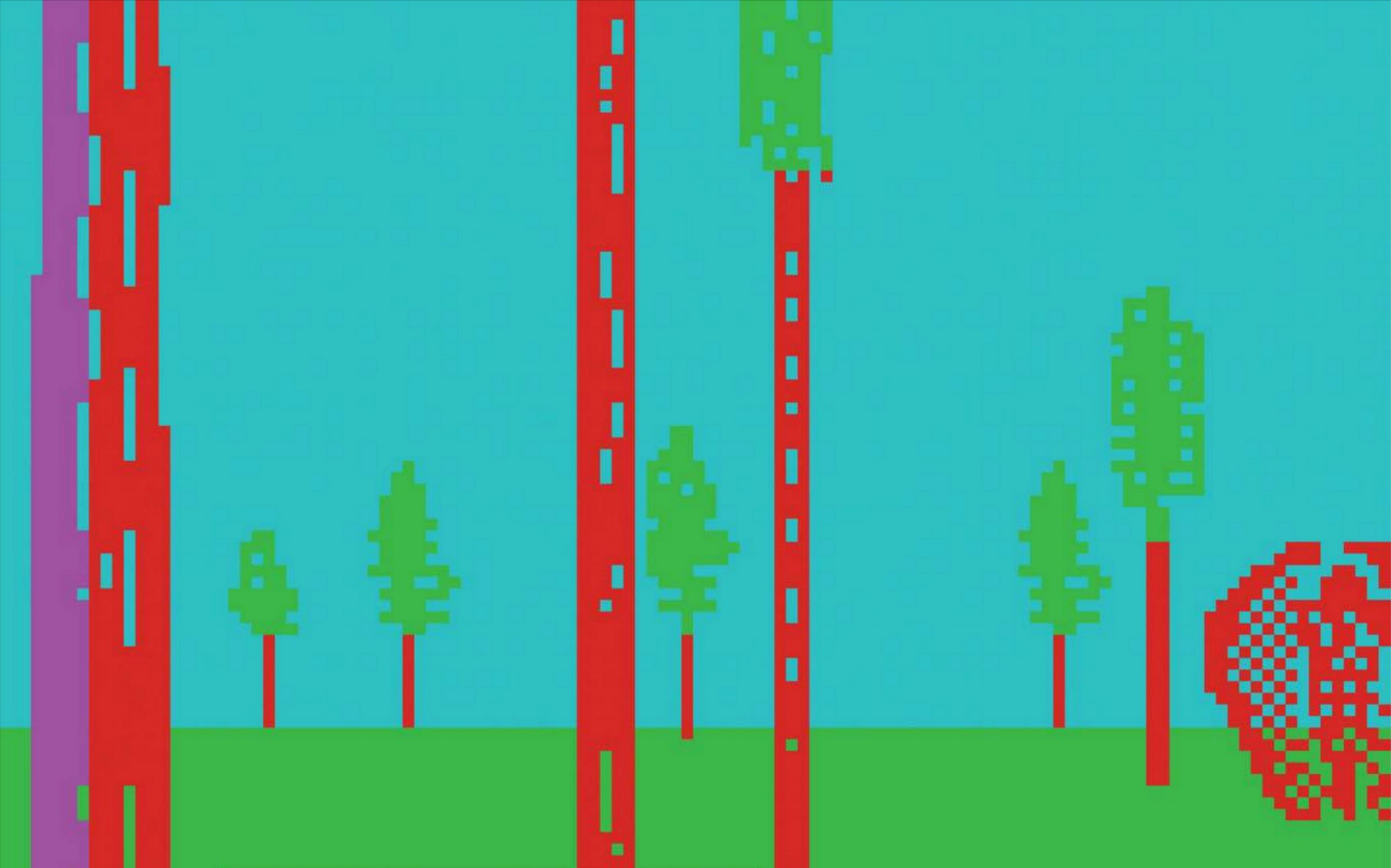
By mid-2008, Tim had raised 7.2 million euros from institutional investors. "I was pumping up the business, waiting for a big media company to move in and buy us," explains Tim. Unfortunately, the economic meltdown arrived and the banks called in their unsecured loans when they fell due. Virgin Play couldn't repay it all, and Tim was having disagreements with the private investors as to the direction the company should be taking. They wanted to do Nintendo DS games, while Tim felt that the future was in online gaming.

In the end, Tim Chaney and Virgin Play parted company, and Tim returned to the UK to pursue new business opportunities, ending his 17-year association with the Virgin name. Meanwhile, VIE owner Titus was having problems. Clashes with Interplay's senior management, legal issues and a spate of lacklustre releases were giving the French publisher major headaches. It changed its company name to Avalon Interactive in the summer of 2003, but it made no difference. Within two years the company shut down for good.

Virgin Play in Madrid was therefore the last standing vestige of the company that Nick Alexander created in 1983 and Tim Chaney turned into a huge, bold, brash, cocky behemoth of a videogames publisher in the Nineties. Virgin Interactive Entertainment may be no more, but its legacy remains to this day.



» [PC] The collapse of Mirrorsoft gave VIE the chance to sign titles like *Beneath A Steel Sky*.



3D Deathchase

NOT BAD FOR A LITTLE FURBALL…

» RETROREVIVAL



» ZX SPECTRUM
» MICROMEGA
» 1983

If you were young – or young at heart – in the early Eighties and ever set foot inside a cinema, chances are you spent quite a bit of time fantasising about riding some kind of futuristic bike at breakneck speed, zig-zagging your way past lethal obstacles.

You'd watched Jeff Bridges on his Light Cycle in *Tron* and, of course, a thrilling speeder bike chase in *Return Of The Jedi*. You wanted a 'future bike' of your own. Luckily, thanks to the coding genius of Mervyn Estcourt, ZX Spectrum owners could get similar exhilaration in front of their tele-boxes: his exercise in wish-fulfilment that provided such thrills was *3D Deathchase* – or *Deathchase* to its friends, and to those people who put the game's title screen above its dodgy box art.

The story is that everyone blew each other to bits in 'the Great War', leaving warlords battling for control in whatever's left of North America, which is now apparently covered in huge forests. So far, so much like just about any modern first-person shooter. You take the role of an elite mercenary, patrolling day and night, blowing up enemy bikers for a grand a pop and trying not to turn yourself into a mercenary pizza by slamming into a tree. Helpfully, the other riders and the occasional tanks and helicopters that pop up on the horizon aren't armed, and merely try to flee. It's best not to think about that while you're mercilessly murdering them to death for a boost to your bank account.

At the time, the game was amazing: fast, responsive and squeezed into just 16KB. A decade later, it proudly topped *Your Sinclair*'s top 100 list, fending off the likes of *Stop The Express* and *Head Over Heels*, and it still impresses today. Although the graphics are basic and the buzzing audio's annoying, you soon get lost as you zoom deeper into the ever-thickening forest, blowing away bikers and trying to avoid getting a mouthful of tree. Hopefully, one day **Retro Gamer** will be able to get the full story, if we can track down the elusive Mr Estcourt. For now, there are trees to get embedded in at high speed. *




HI:0000000
ORANGE

GRAZING



SADDLES

THE COMPLETE HISTORY OF ROAD RASH

Stuart Hunt dons a crash helmet and charges his trusty Taser to take a look back at the blood and tyre marks that were left by the Road Rash series, one of the most technically impressive racing series to emerge from the 16-bit era, and goes mano a mano with Mega Drive series producer Randy Breen



Riding a motorcycle can be a dangerous pursuit. The closest thing a human can come to sitting on a rocket and lighting the fuse without going into space, it's no surprise that to ride one safely and sensibly you have to dress like you're about to be shot out of a cannon. If you're a responsible rider, though, and take the relevant safety precautions – such as always wearing a crash helmet, and never, ever attempting to ride one wearing flip-flops – motorcyclists will tell you that there is simply no thrill quite like it. Translating that thrill into videogames, however, has always been the challenge sitting before game developers. The danger and inherent buzz that comes from riding a motorcycle in the real world is palpable and omnipresent, and impossible for videogames to re-create. Understanding this, it was a clever strategy by EA in the early Nineties to look to inject a sense of exhilaration by another means.

ROAD RASH ON MULHOLLAND DRIVE

Though many talented people were involved in making *Road Rash* the classic game that it was, there were really two men integral in getting it made. The first man was Randy Breen. Game designer and producer of the *Road Rash* series for the Mega Drive, Randy, a biking enthusiast, joined EA right at the start, in 1986, at a time when the company's payroll was fewer than 100 people.

"In the early days, EA was a publisher managing external developers creating original titles. Most of these were produced for PCs like the Commodore 64, Apple IIc and the IBM PC," recalls Randy. "EA was slow to migrate to the Nintendo Famicom largely because of the Atari console bust in the mid-Eighties; by the late Eighties EA had started to build some internal development capacity. We began some in-house R&D on the Famicom to engineer a road effect for a driving game. The decision was made to shift focus and make a big push on the Sega Genesis with its introduction to the US market. Engineering on the road effect was then moved to the Genesis."

The person responsible for that road effect, and the second key player in this story, was Carl Mey. Working as technical director for EA in 1989, one of Carl's first projects was to create a banked road effect for a brand new NES racing title. However, he soon realised that while the console

GRAZING SADDLES





"I WAS BIG INTO MOTORCYCLES AND THOUGHT THEY COULD ADD MORE ENTERTAINMENT VALUE THAN CARS"

could create an impressive road-scaling effect, banking would be stretching its capabilities a little too far. His efforts were not wasted, though, as it was this effect that was adapted to the more-powerful Genesis and helped to generate the impressive road effect in *Road Rash*.

In an interview with our sister magazine **games™** discussing the making of the first game, Carl, who also worked on the Mega Drive hit *Desert Strike*, explained in detail about how the effect worked and how the technology behind the *Road Rash* series started to take shape: "I created a super-fast scaling algorithm that allowed several scaled sprite images in addition to the road effect. My effect was exactly like Mode 7, except there was no rotating around the Z-axis. While optimising the code I figured out that the interrupts I used to set scale per scan line were using about 60 per cent of the CPU, and, at the time, Edwin Reich was working on a true 3D version of *Blockout* for the Mega Drive, so we adapted the technology for *Road Rash*. We were able to render all the detail for the road, including the dashed lines. It was all smoke and mirrors but it was actual 3D rendering."

Randy produced and assisted on a number of driving games before *Road Rash*, including *Ferrari Formula One* and the acclaimed PC and Amiga game *Indianapolis 500: The Simulation* – a game on which he worked as assistant producer and that gave him the initial spark to bring a motorcycle racing game to the Mega Drive.

Developed by the now-defunct developer Papyrus Design Group, and designed by studio founders David Kaemmer and Omar Khudari, *Indianapolis 500* is widely regarded as being one of the first true arcade racing simulators to appear on home computers. A novel departure from arcade racing titles of the time, the game offered players the chance to compete in a faithful representation of the 500-mile Indianapolis 500 race, and allowed players to tweak the settings of their vehicles, test their setups in practice races, and even race a full 200 laps around an impressive virtual version of the Indianapolis Motor Speedway.

"*Indy 500* by Papyrus was truly a great game and ahead of its time, but it was incredibly difficult to play," says Randy. "Racing takes a lot of discipline and focus. I felt there was opportunity to make driving games more fun and reach a wider audience. I was big into motorcycles and thought they could add more entertainment value with characters you could see rather than with cars only visible from the rear or a view from inside the cockpit that occupied most of the screen."

Randy put forward his idea to his bosses, but it was met by some resistance, as the thinking was that cars were more popular than bikes. But there was more behind his desire to do a motorcycle racing game than simply his own love of motorcycles; there was a technical reason too.

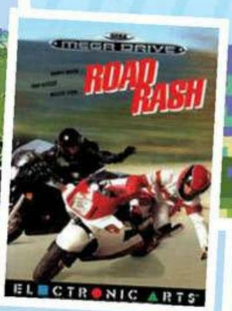
"There was a sprite limitation on the Genesis. More than seven sprites on a line and the sprites would start flickering and disappear randomly. A car on screen at reasonable size could take three or four; a bike could be shown with one or two, so we could effectively get more action on screen with motorcycles," Randy continues. "I took inspiration from my passion for bikes and experiences in the thriving sport bike culture in the hills and back roads around San Francisco, video of shoving and kicking during tight racing in MotoGP, biker gang action in *Akira* and the bike pump scene from *Breaking Away*. I pitched a concept entitled *Road Rash On Mulholland Drive*. It was ambitious given the capability of the console but we were able to include much of the original concept."

Following that colourful pitch, *Road Rash* was eventually given the go-ahead, with Randy leading the internal team that worked on the game. After a year of development, the pressure was on for the team to showcase a demo of the game. Randy remembers the moment well.

"Our first demo didn't go well," he says. "EA was showcasing Genesis products and demonstrating them well before launch. We struggled to maintain a reasonable frame rate and the animations weren't effective. There was

» [Mega Drive] *Road Rash* featured an impressive road-scaling effect and some insane physics. You could never do this in *Hang-On*.









CONVERSION SCRAPERS

Your guide to every conversion of Road Rash

AMIGA

■ A very decent conversion that actually looks crisper than the original, although it isn't quite as smooth. There is little separating these conversions, to be honest. The Amiga version has loading times, joystick controls, two fewer fire buttons, and it doesn't sound as crisp. That's probably about it.



GAME BOY

■ It would be ambitious to try to cram any 3D racing game onto the Game Boy, let alone one with combat elements. Somehow, though, the handheld manages to do a competent job here. Certain elements are understandably lost in the port, though: you're restricted to punching and can't purchase new bikes.



GAME BOY COLOR

■ Despite the name, the Game Boy Color version of *Road Rash* was actually a conversion of *Road Rash II*, and a decent one at that. While the racing is a wee bit sluggish, we can't fault the graphics, which were done by Stoo Cambridge. This version also included kicks, weapons, the bike shop and a two-player link-up mode.



MASTER SYSTEM, GAME GEAR

■ Considering that the original was said to be pushing the technical limits of the Mega Drive, that Probe Software managed to squeeze the entire game onto the Master System was an incredible feat. A fantastic conversion that isn't as smooth or quick, nor does it sound as good, but it impresses in every other area.



scepticism that we could pull it off, but over the next few months Dan Geisler and Walt Stein [*Road Rash*'s co-designers] managed to improve the performance and Connie Braat did a great job of getting the animation right. Arthur Koch and Matt Sarconi, among others, were able to strike a great balance between realism and the impressionism required by the platform."

Set from a third-person viewpoint, *Road Rash* saw players take part in an illegal road tournament divided between five races, all taking place on roads based on California State Routes, including Sierra Nevada, Palm Desert and Redwood Forest. As players progressed through the game, rather than new tracks being added to the game, existing ones would get progressively longer, while the competition got faster and obstacles more numerous.

As well as its implementation of combat, there were a number of other aspects that made *Road Rash* a great racing game. Its impressive pseudo-3D landscape was lavishly dressed with realistic scenery and interactive objects. Players not only had to be wary of other riders, but also the local wildlife, oncoming traffic, roadside fixtures and even police officers, who pursued racers on patrol bikes, beat them with nightsticks and busted them if caught.

There were even a number of simulator-style touches in the game. Its HUD featured wing mirrors to offer a full 360-degree view of rival racers, and when players did come off their saddles they kept full control over their biker and had to direct him back to his smoking high-performance wreck.

EA injected a real sense of personality into the game too. Rival racers were given distinct characters and delivered between-race banter to create an immersive racing world in which players really felt like wet-eared rookies trying to climb its ranks. And players could use money earned from races to purchase superior performance bikes or fix their old battered ones. Speaking of the bikes, because of the violence in the game, EA was unable to secure official licences from manufacturers and so *Road Rash*'s garage instead comprised soundalike bikes such as the Panda, Shuriken and Kamikaze – Honda, Suzuki and Kawasaki, respectively – and the ultimate prize for any rasher, the powerful Diablo 1000, which was based on a Ducati. From the realistic physics that saw bikes get satisfyingly launched high into the air, to the game's signs that could actually be used to determine the next turn of the road, *Road Rash* was full of immersive little touches.

Road Rash took the team about 21 months to develop, and it was released in the spring



» [Mega Drive] From the very outset, *Road Rash* strived to offer an immersive racing experience by giving personalities to the rival racers in the game. Remember wanting to punch this smug git?

of 1991. Following its unsuccessful first unveiling a year into development, the early kinks had been ironed out and it won over gamers and critics alike. And the success it saw was probably just as much down to the platform it appeared on as its quality. The game's edgy, brutal sports spin on the racing genre found an effortless fan base among the teenage Mega Drive audience, with its user base demanding a staple diet of less cutesy videogame fare.

BUILDING ON THE ORIGINAL

Randy tells us there were plenty of ideas that the team was not able to include in the first game, and so when *Road Rash* became a success, there was an opportunity to implement them and build on the original game in the sequels.

If there was one thing in particular that the original *Road Rash* was sorely lacking, it was









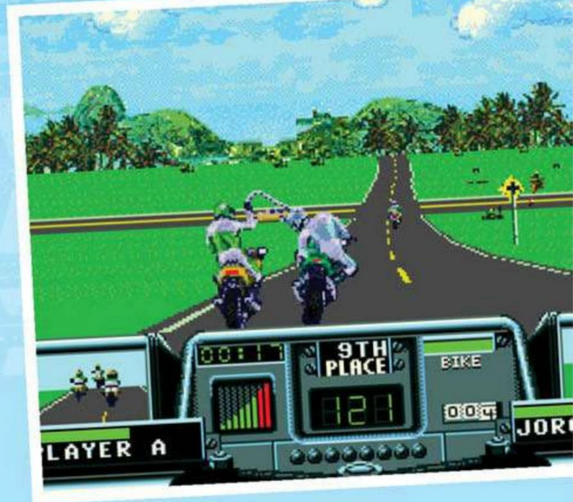
GRAZING SADDLES

simultaneous multiplayer. While it did feature a two-player mode, it saw players having to take turns in their own single-player game, which simply wasn't the same. Thankfully, though, EA remedied this in the sequel by offering two players the chance to compete in three flavours of multiplayer: the original take-turns method, a new split-screen mode that allowed players to compete in the same tournament simultaneously, or a duel game called Mano A Mano, in which two players raced head-to-head without NPC riders on any of the five tracks in the game.

Road Rash II's premise again saw players climbing the ranks of an illegal motorcycle competition, but one that was now stretched a little further afield – the tracks in *Road Rash II* were set in different American states, rather than just California. All the core elements, such as the fighting system, the rival biker interaction, having tracks grow longer with each new class and the bike buying were carried across.

In fact, *Road Rash II* really feels more like fine-tuning than an out-and-out sequel, not that there's anything wrong with that. EA was clearly wise to the fact that fans would want more of the same biker-brawling action, and so improved the formula.

Certainly the most innovative thing that the sequel introduces is a more varied combat system. Chains were added to the melee, and different attacks and weapons now inflicted different amounts of damage on bikers too. Whereas before a few punches to a rival's visor was generally all that was needed to send them spiralling to the tarmac, fights now felt more involved, with bikers trading blows as they weaved between the traffic. In addition, *Road Rash II* also introduced bikes with nitrous oxide injections. Offering players a temporary speed boost over their bike's top speed, the injections were only fitted to the more powerful 'Nitro' class bikes in the game, meaning players had to accumulate quite a bit of cash for the chance to use them.



ROAD RASHERS

With the success of two *Road Rash* titles, the series was beginning to hit its stride and become a hot property for EA. As a result, three separate *Road Rash* games were then put into development internally, almost simultaneously, for three different machines: the Mega Drive, the Sega CD and the upcoming 3DO.

Formed by entrepreneur and Electronic Arts co-founder Trip Hawkins, The 3DO Company had partnered with a number of big consumer electronics companies for the manufacture of its new state-of-the-art 32-bit CD-based console, the self-titled 3DO. Electronic Arts was one of its partners and supported the system in a software capacity, releasing exclusive games for the machine based on its most popular franchises of the time: *FIFA*, *Need For Speed* and *Road Rash*.

The 3DO version of *Road Rash*, simply titled *Road Rash* despite its differences to the original, can almost be seen as a remastering of the concept rather than a sequel or remake. Regarded by many as the pinnacle of the series, it takes all the core *Road Rash* staples and exposes them to the 32-bit processing power of the 3DO to create a nitrous-injected version of the game, boasting faster gameplay, photorealistic visuals and a great soundtrack too.

It returns to the California setting of the first game, and sees two of the original tracks make a return: Pacific Coast Highway and Sierra Nevada. The gameplay, weapons, fighting system and way players progressed through the game remained the same as in previous games. Players once again had to climb the competition ranks by racing on slowly unfurling roads, which now featured branching sections, and purchasing better bikes with race winnings, but this time the game was divided into two modes: Thrash mode, a pick-up-and-play arcade game in which players picked a race and were thrown straight into the action; and







SKITCHIN'

■ Understandably wanting to capitalise on *Road Rash*'s success by repurposing its impressive engine in other scenarios, Electronic Arts looked to the world of inline skating for the 1993 Mega Drive game *Skitchin'*. Designed by David Warfield, it was positioned to take advantage of the rollerblade craze that was sweeping America at the time, and in terms of its gameplay, it 'skitched' – the art of clinging to the back of a car while skating – on the back of *Road Rash* by mixing combat with racing. It's not a complete carbon copy, though, as it introduces a few new ideas to the formula. It adds stunts to the mix and has a better upgrade system, allowing players to purchase new wheels, skates and safety equipment with their race winnings.





Big Game mode, in which players picked a specific biker with a signature bike and a different skill set and then played through a sort of career mode.

The visuals received the biggest overhaul, with the cartoonish character sprites dropped for photorealistic ones, which lent the game a new meaner, grittier look that suited the series brilliantly, and EA also made the 3DO *Road Rash* more immersive: rival bikers each had a distinct personality that reacted dynamically to what was going on in the tournament, and players had a status meter to help them determine how much notoriety and respect they were earning in the game from their fellow rashers.

To finish off this exciting new next-gen interpretation of *Road Rash*, Randy and the team would also make use of the high-quality sound and FMV capabilities of the 3DO by including a memorable rock and grunge soundtrack and live-action cut-scenes in the game. As Randy explains, though, getting these elements into the game wasn't an entirely painless process.

"I wanted to really exploit the CD, which led to the music video concepts and the soundtrack featuring Soundgarden," he says. "I was a fan at the time and our marketing director, Leslie Mansford, had a relationship with A&M Records – she introduced me. I never got a chance to meet Chris Cornell but I was told he was a fan of the Genesis games and played them on the tour bus. Getting a music deal done was a nightmare. There was no precedent – these kind of deals hadn't been done yet and licensing expectations were based on movie deals. We eventually got it done, perhaps made easier by their own interest in the game. We used the music in the presentation and music videos and had the fortune of including newly released songs from *Superunknown*, just as Soundgarden was really breaking out. I would have loved to include streamed music in the game but we were already streaming graphics and it was deemed too challenging to get it done."

"I directed and rode some of the bikes in the video along with art director Jeff Smith and other local AFM club racers from the area," Randy adds. "This included my own yellow Yamaha FZR 1000, which was featured on an earlier *Road Rash* cover, along with a red Ducati 900SS, which was a prop we had purchased for shooting the animatics. On the last day of the video shoot I wheelied the bike away from two police cars in San Francisco but had to hit the brakes hard to keep from going through the red light at the next intersection. The front tyre slid on the greasy San Francisco street and I laid the bike down. Marketing found the wrecked bike useful and after making a few trips to trade shows it found a home in the EA corporate lobby, where it sits today."

The other two games, the US-only Sega CD version and *Road Rash 3: Tour De Force* used content derived from the 3DO game. The Sega CD version was essentially a 16-bit remake of the 3DO game using the original Mega Drive engine. Impressively, it keeps the same tracks, menu screens, modes, music and FMV cut-scenes, and it's only when you actually enter a race that you notice a difference – the game looks like a prettier and smoother version of *Road Rash 3*. It doesn't matter, though, because it's still a great *Road Rash* title. It even manages to get one up on the 3DO version by managing to have streaming music played during the races.

TOUR DE FORCE

Though *Road Rash 3: Tour De Force*, the final *Road Rash* game released for the Mega Drive,





» [Mega Drive] Atypical of most racing games of the time, *Road Rash*'s tracks gradually increased in size, with rival bikes becoming more deadly and the roads more congested.



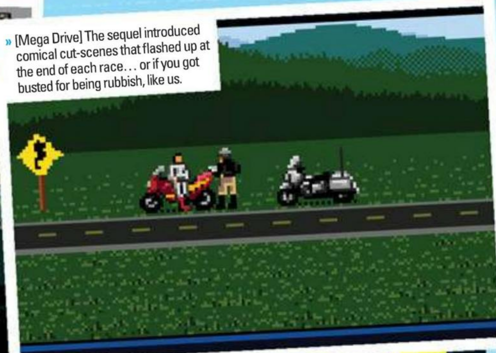
» [Mega Drive] *Road Rash II* was the first game in the series to include simultaneous multiplayer. It became a staple of the series until the release of *Road Rash 3D*, before returning in *Jailbreak*.





GRAZING SADDLES





» [Mega Drive] The sequel introduced comical cut-scenes that flashed up at the end of each race… or if you got busted for being rubbish, like us.

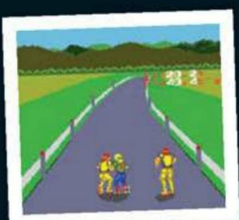
VEHICULAR MANSLAUGHTER

Road Rash wasn't the first game to mix combat with racing…

S.T.U.N. RUNNER

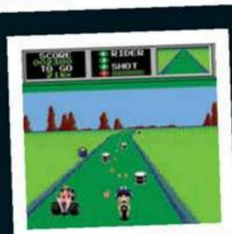
■ Atari's fantastic polygonal racing game, which ran from its *Hard Drivin'* hardware, remains one of the best examples of high-octane vehicular combat ever made, in our opinion. Sitting behind the wheel of a state-of-the-art bobsled, players had to scud through tunnel networks and maintain an optimum speed by keeping to the correct racing line and blasting away any poor vehicles that were unfortunate enough to be in their way.





FIGHTING ROLLER

■ Possibly the campest fighting game ever made, *Fighting Roller* mixes the radical world of rollerskating with the equally radical world of unarmed combat. Controlling a spandex hero with a sun-coloured mullet, this into-the-screen racer sees you jumping and dodging obstacles while occasionally fighting pathetically with rival skaters who appear from the bottom of the screen. It's colourful and a bit odd. That's all it has going for it.



MACH RIDER

■ A launch game for the NES, *Mach Rider* is a distant relative to the *F-Zero* series and was actually based on an early Nintendo toy from the Seventies. A *Hang-On*-style racing game with shoot-'em-up bits, players take on the role of a motorcycle superhero who stars in a *Mad Max*-style yarn about patrolling roads, avoiding obstacles and blasting away Quadrunners – an unsavoury gang of bikers who have somehow managed to enslave the world.



SEICROSS

■ This early side-scrolling racing game from Nichibutsu is set in the distant future and finds players storming an enemy fortress on a hover bike. Enemy riders harass the player by shunting them into objects and the scenery, and you can retaliate by either bumping them back or blasting them into flaming wrecks with your guns. As everything in the game kills you outright, the action is pretty intense and frustrating.



3D DEATHCHASE

■ As **Retro Gamer** has a policy whereby it cannot go more than three issues without mentioning *3D Deathchase*, we've had to include it here in order to keep the magazine ticking over. Mervyn Estcourt's popular 3D bike shooter was an absolute marvel when it appeared on the Spectrum. Taking its cues from the speeder bike chase in *Return Of The Jedi*, the game sees players dodging trees and blasting away rival bikers. *Action Biker* meets *Doom* it most certainly wasn't.

also used content from the 3DO game, it was a completely new instalment, with only superficial connections to its 32-bit stablemate – most notably in the way it attempts unsuccessfully to display photorealistic bikers. As the game's title implies, this time the tournament went international, leaving America for tracks set in six countries, including Brazil, Germany, Australia and the UK. It was another solid entry in the series, although its visuals aren't as crisp as *Road Rash II*, and once again it's a fairly safe sequel that doesn't play about with the formula much. The only notable thing it adds is the chance to purchase specific upgrades for your bike.

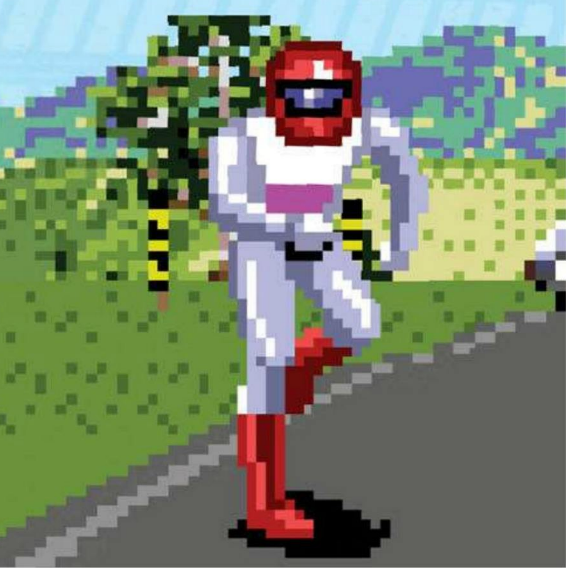
Road Rash 3 wasn't as popular as its predecessors, and with *Road Rash* for the 3DO raising the bar and showing fans what they could now expect from next-gen *Road Rash* games, the series finally had to wave goodbye to the platform that made it a success.

RIDE ANGRY 3D

After finishing work on *Road Rash* for the 3DO, Randy then worked as executive producer on *Road Rash 3D* for the PlayStation, and also offered creative direction on the following game in the series, *Road Rash: Jailbreak*. Wanting to keep the franchise at the front of the pack in a technical sense, EA had felt a pressure to move away from the sprite-based graphics of old and make its next *Road Rash* title a completely new 3D polygonal racing game instead.

Road Rash 3D was an ambitious project that struggled to balance the racing, combat and an extra dimension. The fighting hardly seemed to get a look in during races, with computer riders bickering and fighting among themselves, and as a result the game felt more like a straight arcade racer than a *Road Rash* title. It also lacked any kind of multiplayer mode, which disappointed fans, and visually it looked a little choppy.

"The first PlayStation version of the game was a port of the 3DO, but the trend on PlayStation was 3D and we wanted to transition *Road Rash* away from 2.5D graphics. This turned out to be extremely ambitious given the capability of the platform," answers Randy when we ask him about some of the issues in *Road Rash 3D*. "Articulated



characters and doing collision detection on animated bikes with detachable objects such as weapons turns out to be far more complex than 3D car games of the time that had to animate the wheels and the reflection of the rear window. We were pushing the limits of what the machine could do but were confined by the expectations of the game's concept. The first 3D version took longer than expected as a result, in development for more than two years.

Neither of them fully reached their potential in my view given hardware limitations. The freedom of 3D also produces far greater range of movement, which adds complexity to the gameplay. As a result, these products lacked some of the ease of use the earlier titles had. There was also more creative struggle over the balance of fighting versus racing within the team."

"THE 3DO GAME RAISED THE BAR AND SHOWED FANS WHAT THEY COULD EXPECT FROM NEXT-GEN ROAD RASH GAMES"

Road Rash: Jailbreak was released a year later and was notable for dropping the tournament premise for a story that saw players climbing the ranks inside rival biker gangs to spring a mate out of the clink. The game added a few game modes and twists to the *Road Rash* formula, such as introducing road hogs to the bike roster, a fun sidecar mode that put one player in charge of steering while another concentrated on the fighting, and a pursuit mode called Five-O that let players take on the role of a motorcycle cop tasked with chasing down and busting speeding bikers. Clearly trying to address the criticism that *Road Rash 3D* was a little light on the combat, the game featured 11 weapons, including cattle prods and nunchaku, and also attack combos and special moves.

A few months before *Jailbreak*'s release, N64 owners also received a taste of 3D *Road Rash* by way of *Road Rash 64*. The only game in the series not to have been designed and developed by EA, the property was licensed to THQ and the game produced by Pacific Coast Power & Light (now Locomotive Games), a studio co-founded by former EA employee and EA Sports founder Don Traeger.

Sharing a number of similarities with *Jailbreak*, at one stage during development it was thought that the games were one and the same. *Road Rash 64* is widely considered to be the strongest 3D entry in the series to date, harnessing the 64-bit power of the N64 to throw plenty at the screen at once. The action manages to show a large number of riders fighting on screen, while maintaining a decent frame rate. This does come at a slight cost, however. Detail is dropped, and the riders have a strange cartoon aesthetic to them, but this was a conscious design decision to ensure that the game felt fast and maintained smooth gameplay throughout. Similar to *Jailbreak*, *Road Rash 64* also had the strong emphasis on combat, and a lot of the same weapons appear in both games. In *Road Rash 64*, though, they could be used in combination. For example, players could use a Taser or a cattle prod to temporarily stun rival racers and then follow up with a swing of a bat or club to knock them off their bikes. *Road Rash 64* offered more control over the races than other games in the series, allowing players to adjust variables such as traffic and pedestrian congestion, as well as the number of police and opponents who you are racing against.

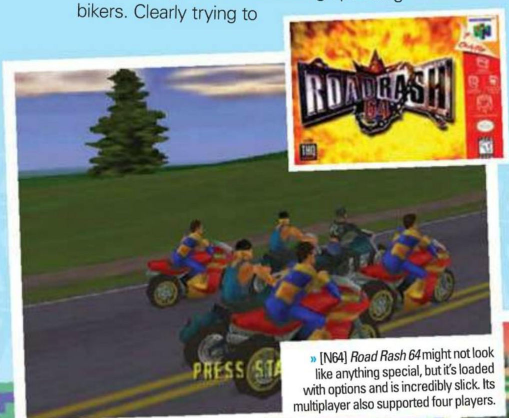
In 2000, a short time after the release of *Jailbreak*, Randy left EA to join LucasArts Entertainment, where he worked as vice president of product development. Today, he is the CEO of SGN (Social Gaming Network), one of the largest game publishers on the iPhone, and drives a Ducati to work.

Sensing that *Road Rash* is clearly a series that is still very close to Randy's heart, we finish our time by asking the industry veteran if he's aware of any attempts by EA to revive the *Road Rash* franchise since his departure, and how he would feel about seeing a new *Road Rash* game released today without his involvement.

"I'm aware of a few attempts by EA to revive the series, each terminated for one reason or another thus far. My view is the core teams of the early versions had a clear vision for what we were creating. I suspect later attempts may have lacked the focus or adherence to the core themes or the passion for the concept. *Road Rash* struck a balance between racing, action and entertainment and managed to be a bit edgy and funny without going too far over the top. It is one of very few original properties created by EA. I'm very proud of the work our teams did at the time. I believe the theme is as relevant now as it was then and much more viable in 3D with today's hardware. My hope is that EA will revive the series with the same care and passion."



» [3DO] For many people, *Road Rash* on the 3DO is the apex of the series. The game was later ported in its entirety to the PlayStation.



» [N64] *Road Rash 64* might not look like anything special, but it's loaded with options and is incredibly slick. Its multiplayer also supported four players.





Special thanks to Trip Hawkins for putting us in touch with Randy Breen and to Randy himself for answering our questions

Minority Report

More obscure delights in Minority Report as we return to the excellent and highly underrated Zorgon's Revenge, discover the rather brilliant Gals Fighters on Neo Geo Pocket, and also look at Mario Clash, one of the best games to be found on Nintendo's ill-fated Virtual Boy



ZORGON'S REVENGE

■ SYSTEM: ORIC-1 ■ DEVELOPER: JOHN SINCLAIR ■ YEAR: 1983

» ORIC-1



» [Oric] We're not sure what it is, but reaching for that crystal sets the monkey/dinosaur hybrid on you.

■ ***Zorgon's Revenge* is a hard game. In fact, it's tougher than granite that's been encased in diamond, which has been encased in an extra thick layer of adamantine. And yet we still can't stop playing the damn thing.**

Released relatively early in the Oric's life, it's a kind of sequel to John Sinclair's equally impressive *Xenon 1*. Whereas John's earlier game was a straightforward shoot-'em-up – and a bloody good one to boot – *Zorgon's Revenge* had far more variety to it.

First off it looks absolutely beautiful – well, as beautiful as any Oric game could ever hope to look – thanks to super-slick animation, well-defined sprites and some truly glorious high-resolution visuals. It was a fantastic showcase title for the machine at the time of its release, and even now it still manages to impress.

While the smart visuals were more than enough to get you instantly hooked, it was *Zorgon's Revenge*'s actual gameplay that proved to be the clincher, and while it boasted plenty of amazingly unfair moments – more on those later – it was so compelling to play that it became rather difficult to put down.

At the beginning of the game you're given the option of choosing from one of four randomly selected levels, which change their position each time you play. They all range in both variety and difficulty but the aim of each is always the same: collect the solitary crystal.

One stage is set in a cavern and requires you to dodge pterodactyls, giant spiders and what's either a hairless red monkey or a laser-spitting Tyrannosaurus rex – we're not sure,

» NEO GEO POCKET COLOR



» GALS FIGHTERS

■ SYSTEM: NEO GEO POCKET COLOR
■ DEVELOPER: SNK ■ YEAR: 2000

■ **Crossovers of popular** franchises are always good value for money, but this sassy offering from SNK is one of the better ones. Popular female characters from a number of classic SNK franchises including *King Of Fighters*, *Last Blade*, *Psycho Soldier* and *Fatal Fury* all get together for one big dust-up.

While the combat is very similar to a great many of SNK's fighters – no bad thing in itself – *Gals Fighters* comes to life thanks to its fizzy charm, amazingly cute visuals and fantastic playability. There aren't that many characters on offer, but that just gives you the opportunity to actually learn them. Nutty fun.

» GAME GEAR



» BAKU BAKU ANIMAL

■ SYSTEM: GAME GEAR
■ DEVELOPER: SEGA ■ YEAR: 1996

■ **Fans of puzzle** games would do well to track down this increasingly rare Game Gear release. Similar to the Master System version, which in turn was a cut-down version of the arcade and Saturn game, *Baku Baku Animal* has you matching animals to their favourite foods. Once sated, they will disappear, dumping blocks onto your opponent's screen.

The style of the gameplay is very similar to *Tetris Attack*, and while the mechanics on offer are nothing new, it's a surprisingly compelling and addictive game, especially if you can find a second cartridge for the multiplayer mode.

» VIRTUAL BOY



» MARIO CLASH

■ SYSTEM: VIRTUAL BOY
■ DEVELOPER: NINTENDO ■ YEAR: 1995

■ **With Nintendo's new** 3DS console now available, we felt it was only fair to look back at one of its earlier headache-inducing 3D games. Although Mario didn't appear in any conventional platformers on the Virtual Boy – that was left to Wario in the excellent *Wario Land* – he did appear in *Mario Clash*, a charming update of his old *Mario Bros* arcade game.

It's pretty fun as well, requiring you to leap on Koopas and throw their shells into other enemies. The 3D effect is fairly convincing and there are some clever score mechanics at work. It's a little slow and jerky but surprisingly good fun to play.



» [Oric] John Sinclair must like his shmups as he's sneaked one into *Zorgon's Revenge*.



» [Oric] Blue shows completed stages, so you're nearly there now.



» ABOUT THE SYSTEM

- Tangerine formed Oric Products International Ltd in 1983, which led immediately to the development of the Oric-1, released later that year.
- It is estimated that over 160,000 machines were sold in the UK, which is an impressive number but well below the 350,000 that was originally predicted.

to be honest – while another has you dodging hydra breath and avoiding randomly activated laser beams.

There's more, though. Another stage is set in a huge cavern that features falling rocks – or eggs maybe – and a large bird. You need to dodge past the falling debris and grab the bird. It then flies you to the middle of the screen where you must once again cross the play area and avoid the now dangerously close falling obstacles. Manage this and you need to make an annoyingly harsh leap of faith onto the same bird in order to reach your prize. Fail to catch him, though, and you'll be splattered over the floor below. The final stage, and our favourite, requires you to pilot a small ship and shoot your way to victory. It's the easiest stage by far, although this could be more due to our complete skill with the genre than a lapse in difficulty on John's part.

Even this isn't the end, though, as recovering crystals transports you to another screen outside the walls of a castle. Dodge the egg-dropping birds – we've never understood why birds would want to pelt you with their unborn young, but we'll suspend our disbelief – to drop a section of the bridge. Do this four times in order to face a final maddening encounter inside the castle walls. Manage this impossibly tough feat and you'll finally be reunited with your loved one. Aww.

Maddeningly frustrating due to certain sections requiring pixel-perfect jumps, *Zorgan's Revenge* nevertheless manages to be a slick and thoroughly enjoyable piece of programming and a good showcase for the Oric's capabilities.



» [Oric] You'll need to complete all four levels before you can reach the Princess inside.

» VECTREX



» STAR CASTLE

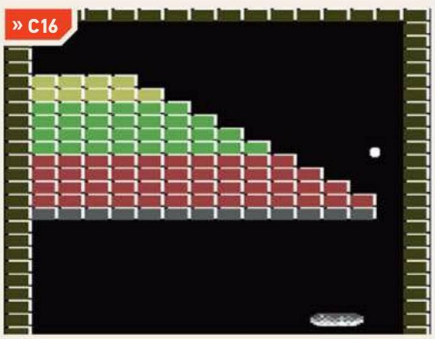
- SYSTEM: VECTREX
- DEVELOPER: CINEMATRONICS ■ YEAR: 1983

Oddly considering its greatness, Tim Skelly's *Star Castle* only received a port to the Vectrex. Fortunately it's a very good one, thanks to tight controls and great visuals, which perfectly capture the stark beauty of the original 1980 arcade game.

The titular *Star Castle* sits in the centre of the screen, and you must shoot down its shields in order to destroy it. It sounds easy, but regenerating shields and homing mines ensure that it's anything but.

Yes, it's hard as nails, but it's also amazingly addictive and, aside from some poor LCD ports, this is the only alternative to the arcade original.

» C16



» ARTHUR NOID

- SYSTEM: C16
- DEVELOPER: SHAUN SOUTHERN ■ YEAR: 1988

If last month's Attack of the Clones taught us anything, it's that knock-offs of popular arcade games were everywhere in the Eighties. This offering, if you couldn't tell by the name or screenshot, is a clone of Taito's *Arkanoid*, and bloody good it is too. Programmed by Shaun Southern, it's a typically slick piece of code that has all the power-ups of the arcade original, extremely similar level layouts that are sometimes identical to the last brick, and an annoying addictive quality that keeps dragging you back for one more play. Considering that *Arkanoid* wasn't released on the C16, this filled the gap perfectly.

» VIC-20



» ARCADIA

- SYSTEM: VIC-20
- DEVELOPER: IMAGINE SOFTWARE ■ RELEASED: 1982

***Arcadia* is one** of those rare examples where the VIC-20 version totally wipes the floor with its C64 counterpart. Playing like a cross between *Galaxian* and *Space Invaders*, it's a ridiculously tough blaster that has you shooting down waves of enemies as they slowly descend towards you.

There's great risk and reward to *Arcadia*, as your ship's bullets only have a limited range, meaning you have to get dangerously close to the enemies. Add in the fact that you'll need to occasionally boost to get past the descending waves and it becomes an insanely tough but very satisfying shooter.

Retro Gamer explains why Lord Alan Sugar's range of 8-bit computers had a certain je ne sais quoi



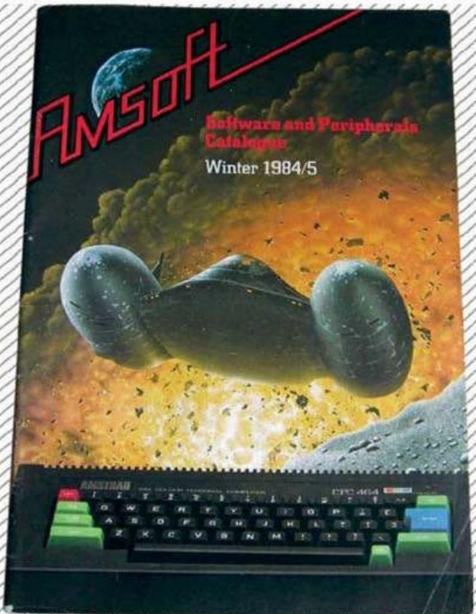
AMSTRA



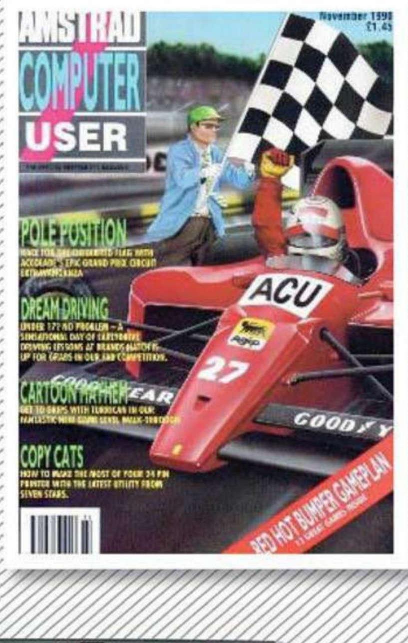
» Manufacturer: Amstrad **» Models:** Amstrad CPC/Amstrad Plus **» Launched:** 1984/1990 **» Country of Origin:** UK

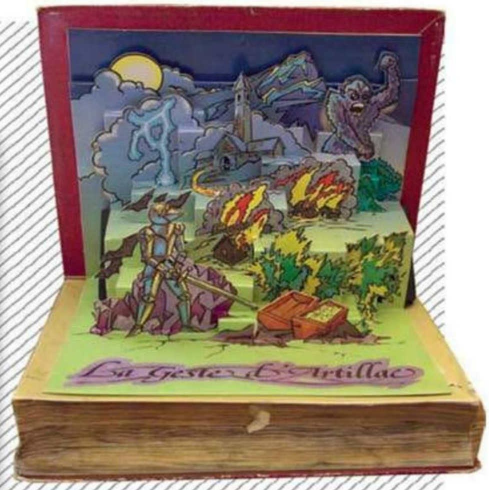
D CPC

AMSTRAD



» Amstrad's own software division, Amsoft, published a host of games.









» The Amstrad CPC used 3-inch disks, which were more expensive than 3.5-inch and 5.25-inch ones.



WHY IT'S COLLECTABLE

Often shot down as "that other 8-bit computer", the range of Amstrad CPC machines has just as much, if not more, to enthral any videogame enthusiast. While there is no doubt that its contribution to gaming is starkly overshadowed by the Commodore 64 and ZX Spectrum, the CPC has more than a few surprises beneath its gun-grey exterior.

Many games started life on the Amstrad CPC, and some of those were exclusive to the machine for a short spell, until their popularity ensured that developers ported them to other computers. Titles such as *Get Dexter!*, *B.A.T.*, *Purple Saturn Day* and *Super Cauldron* fall under this banner. The Freescape system, which can be seen in titles ranging from *Driller* and *Dark Side* to *Castle Master* was developed on a CPC. The Oliver twins produced the *Dizzy* games on an Amstrad too. But, despite these contributions, still vitriol is aimed at the machine. A thread on the **Retro Gamer** forum in 2007 entitled 'Things you never knew about the CPC' suggested, "If you drop them from a great height, they don't bounce," and that "they make great paperweights". Perhaps they do. Yet dismiss this UK computer – Amstrad's first foray into personal computing – at your peril.

In France, gamers took the machine to their hearts. By the time the original CPC range of computers was coming to the end of its manufacturing life in 1990, it had sold more than 650,000 units and had taken more than 50 per cent of the market; games for the CPC sold as many copies as all the other formats put together. Although the CPC 464 with its cassette drive was popular in Britain, the French preferred the disk-based CPC 6128 and, to a far lesser degree, the short-lived 664, and more than 80 per cent of games sold were on 3-inch floppy.

With such a large foothold, French developers naturally made the Amstrad their primary platform. Ubisoft's graphical adventure *Fer Et Flamme* (*Iron And Flame*) was exclusive to the CPC, and it was the French company's first major hit. Developers in France produced some of the Amstrad's most popular and critically acclaimed games, among them Titus's *Crazy Cars* and Loriciels' *Skweek*, the latter having not been released on any other 8-bit machine.

The French CPC releases leaned very heavily towards adventure and arcade titles, including *Captain Blood*, *Defender Of The Crown*, *Iron Lord* and *B.A.T.*, which makes it an attractive proposition for fans of these genres. And since French developers were producing primarily for the CPC, they pushed the technology in ways that many of their British counterparts did not, and so techniques such as overscan and a devotion to the production of superlative graphics were high on the agenda.

Why does this make the CPC ripe for collectors? Simply because there is a treasure trove of import releases to collect. The French philosophy was to produce outstanding-looking games with a unique Gallic edge to them. In truth, it was less a philosophy and more to do with market forces, given that the

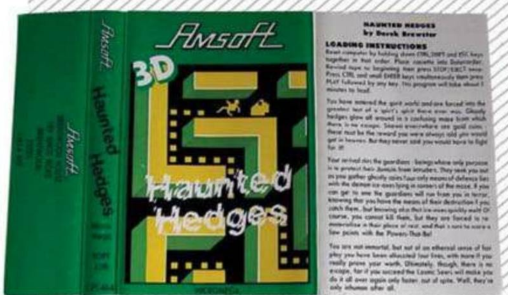
DID YOU KNOW?

■ In Germany, the CPC was distributed by Schneider, without the coloured keys. The company put its name on the 464, 664 and 6128, and while almost all of the keys on each machine were grey, light brown keys replaced the colourful ones of the original. That wasn't the only difference: Schneider placed its logo on the computers, and the start screen also displayed Schneider. It was only later, when Amstrad distributed the machines itself, that they were branded with the original logo. The 6128 in Germany had ribbon cable connectors rather than printed circuit board edge connectors.



» *Amstrad Action* was the most popular English-language CPC magazine. Issue 1 is valuable, with **Retro Gamer**'s David Crookes spending £50 on his copy.

» *CPC Attack* ran for just six issues in 1992, and they don't appear for sale often.









French market was a demanding one. But this means there are games out there that many will not have played and that, with the help of online translation services such as Google Translate, can be thoroughly enjoyed by monoglots.

Spain was the next-largest market in mainland Europe, where it was distributed by Indescorp as the CPC 472, the extra 8K of RAM being unusable but a good wheeze by Amstrad to get around a Spanish tax on computers with 64K or less RAM that lacked Spanish-language keyboards.

Tapes were more common in these countries, which, as in the UK, ensured that there were thriving budget scenes. The downside to the French taste for disks meant cheap thrills were far less common, not that it appeared to damage the machine's sales. Collectors who decide to go for a disk-based machine, however, can rest assured that it is possible to hook up a cassette recorder using an inexpensive lead and, fiddly volume controls aside, play tape-based games without a problem.

Collectors will also enjoy checking out the games that took advantage of the 128K of memory of the 6128 and could be accessed by inserted a 64K RAM pack into the back of a 464. Games included Gremlin's *Nigel Mansell's World Championship, Space Crusade, Supercars, Hero Quest* and *Switchblade*. Level 9 produced *Gnome Ranger, Ingrid's Back!, Knight Orc, Lancelot* and *Scapeghost*, all with pictures on the 128K versions. *The Famous Five, The Pawn, The Guild Of Thieves, Jinxter* and *Corruption* were only playable if 128K was available. Tape titles such as *Spellbound Dizzy* provided extra graphical effects on a 6128, such as animated Yolkfolk. *Gryzor, Renegade, Operation Thunderbolt* and *Bad Dudes vs Dragon Ninja* allowed levels to load in one go. For gamers, an extra 64K was a major bonus.

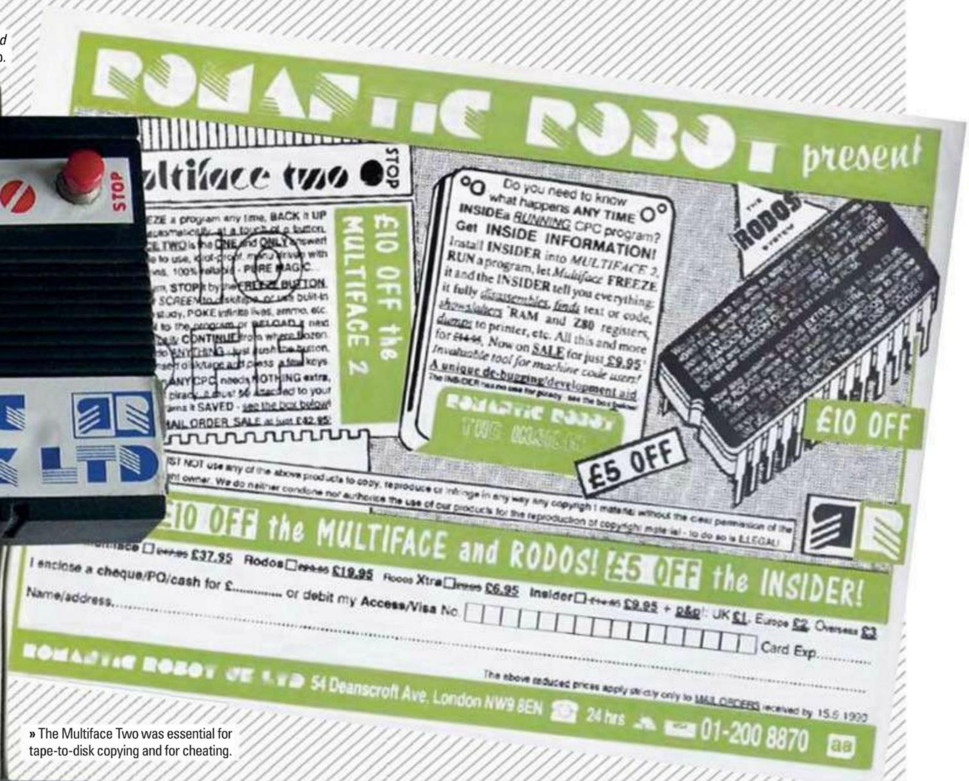
In all territories, the new Amstrad 8-bit computers, which replaced the CPC in 1990, flopped terribly, despite their 4,096 colours and cartridge facilities. They consisted of the GX4000 console, 464 Plus and 6128 Plus, and while Amstrad said it wasn't possible for disk and tape-based games to take advantage of the extra spec, such limitations were broken by a hack, leading to the likes of *Stryker In The Crypts Of Trogan, Prehistorik 2* and Ocean's *Space Gun* using the hardware, and each one is worth checking out.

The commercial failure of the GX4000 and Plus models hasn't lessened their worth to collectors. A GX4000 is a worthwhile purchase, if only to try to track down some incredibly rare offerings like *Chase HQ II, Copter 271* and even *Pang*, which is seen as one of the better games and so is closely held on to by collectors. You could be looking at anything in the region of £50 for a GX4000 console on eBay.

Finally, as the CPC entered its last days, many amazing games were released, including the PD title *Croco Magneto* and semi-commercial titles such as *Fluff, Megablasters* and *Masters Of Space*, which you may struggle to find on their original disks. More recently, French coders Julien 'Targhan' Nevo and Supersly released the amazing point-and-click adventure *Orion Prime*. The goodies keep coming…

Special thanks to Jaime González Soriano, Richard Goulstone, JMD, Kukulcan, Rafa and Xyphoe

THE PERIPHERALS



» An advertisement in *Amstrad Action* for the Multiface Two.



» The Multiface Two was essential for tape-to-disk copying and for cheating.

MULTIFACE TWO

If you are looking to play original games on an original Amstrad CPC, the key peripheral is the Multiface Two. It was such a versatile piece of kit that used to weigh in at £47.95. Its manufacturer, Romantic Robot, typically reduced that amount by a tenner, and it would later suggest that it was a case of "Buy now or it's bye now". The nature of the peripheral – it boasted the ability to copy games as a side effect of its advertised uses – meant it was treading around in a very grey area.

The actual device was nothing amazing to look at and neither was its build quality particularly astounding. It was a small black box with two stickers slapped on the front and a couple of buttons – one blue, one red – with a through connector on one end, allowing users to attach more peripherals and a ribbon cable leading out of the other. But it's not about what it looked like. It's about what it did, and it continues to be so useful for collectors today that you'll be hard pressed to track one down for a low price. They tend to go for around £30 when sold today.

The Multiface Two was developed by Alexander Goldscheider, and it was great for 6128 owners who had cassette decks plugged in to their disk-based machines. It meant they could tap into the mountain of tape games without having to suffer the hassle of waiting for them to load, time and time again. Once the initial load had been performed, a press of the red button froze the CPC and an exact copy of what was in the computer's memory at that time was taken. This could then be dumped to disk, and it was useful not only for making backups but for saving games midway at a time when most games didn't have a save facility. Magazines also printed Multiface cheats, which could be tapped in for infinite lives and the like. This provided a reason to buy for those gamers who did not have disk machines.

Of course, there was software available that attempted to copy games to disk without extra hardware, but this ate into the memory and it was never as successful in copying nor as versatile as this device. The key argument put forward by Romantic Robot against accusations of piracy was that to play your games back on disk, you needed to have the Multiface Two plugged in. That was the theory, anyway, because there was software available in the public domain to get around that restriction and turn copies into standalone programs.

In later hardware revisions, there was a basic memory editor, which was handy for computer programmers, and it was even clever enough to avoid detection. The Multiface Two would always be turned off until the red button was pressed, getting around any games with the ability to detect the peripheral, often leading to the CPC crashing.

The Multiface Two was a revelation and an absolute must for any serious gamer, and today you can use it to make backups of your collection and to speed up loading times of any tapes you have. Oh, and finish those large and difficult games that you couldn't manage in one sitting the first time around.

...AND THE REST



01. Disk drive

The DD1-1 3-inch disk drive and interface for the 464 allowed gamers to play disk-based titles. An FD-1 second drive for the 464, 664 and 6128 was also available, shipping without the interface. In later years, many CPCers would hook up 3.5-inch drives to take advantage of cheaper, higher-capacity disks.

02. dk'tronics 64K Memory Expansion

Any 464 and 664 gamer wanting to get the best out of a selection of games including *No Exit*, *Pirates!* and *Chase HQ* needed to expand the memory. This expansion pack, styled to match the original machines, was inserted into the back of the CPC. Expect to pay £60 today.

03. GX4000

Although not strictly a peripheral, buying this flop console was a way to take advantage of a new wave of Amstrad games. A cartridge slot was built in to the Plus machines, and a hack enabled tape and disk games to take advantage of the 4,096 colours, hardwire sprites and scrolling offered by cartridge games.

04. Joystick

Official Amstrad joysticks were produced and boxed under the subsidiary brand Amsoft. They were rather flimsy affairs and barely lasted a wiggle of *Daley Thompson's Decathlon*. A joystick was bundled with the machine as part of a games pack that included *Monopoly*, *Trivial Pursuit* and *Roland* games. The pack was apparently "worth £150".

05. MP-1 modulator

Anyone unlucky enough to have a green-screen monitor bundled with their CPC soon realised the negative impact it had when playing games. Using an MP-1 modulator on a 464, you could hook your CPC up to a colour television. An MP-2 modulator, with an additional 12V power supply, was made for the 664 and 6128.

06. RS232 serial interface

Useless today but very much useful back in the day, having an RS232 serial interface meant CPC users could hook up to online bulletin boards, where they could swap tips and share information. Adventure game fans appeared to enjoy them, giving access to downloadable public domain games and solutions. Today, it has novelty value.

07. Tape connector leads

Although 664 and 6128 users were blessed with fast disk drives, they would glance enviously at the plethora of cheaper cassette games and *Amstrad Action* cover tapes. All you needed to solve this conundrum was an inexpensive set of leads and a cassette recorder. It was not possible to connect a tape recorder to a 6128 Plus, though.

CPC The Collector's Guide

TOP FIVE GAMES TO PLAY

01. Get Dexter!

■ Often cited as one of the best CPC games of all time, the French graphic adventure *Get Dexter!* originated on the Amstrad in 1986. It looked amazing at the time, its attention to detail raising the gaming bar.



02. Turrican

■ Although originally released on the Commodore 64, this graphically arresting and utterly huge game was a fantastic CPC shoot-'em-up.



03. Rick Dangerous 2

■ As what is arguably the precursor to *Tomb Raider*, *Rick Dangerous 2*, despite its blocky yet colourful graphics, achieved a staggering 97% in *Amstrad Action*.



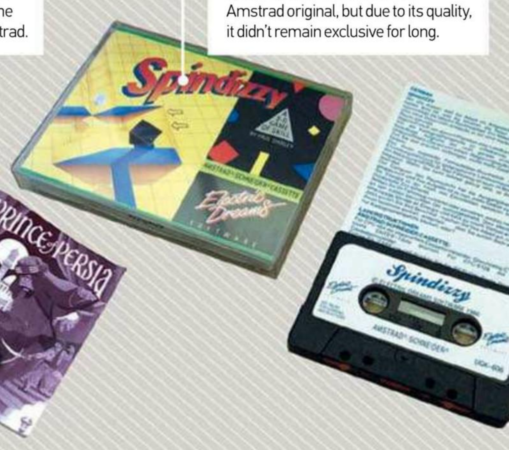
04. Prince Of Persia

■ Jordan Mechner's masterpiece showed that the CPC could hold its own against 16-bit opposition and was heralded as an example of the graphical capabilities of the Amstrad.

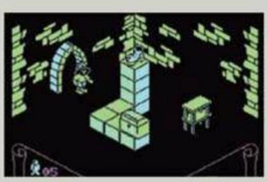


05. Spindizzy

■ Anyone who remembered *Marble Madness* took to the huge 400-screen *Spindizzy* with ease. It was an Amstrad original, but due to its quality, it didn't remain exclusive for long.



PLAY THESE NEXT



Knight Lore

■ The CPC version was better than that of the Spectrum, of that there was no doubt. It was the first Ultimate game to arrive on the Amstrad, with *Sabre Wulf* hot on its heels, and it certainly didn't disappoint. It boasted delicious packaging and a tape bulging with incredible, colourful 3D goodness.



Ranarama

■ A *Gauntlet* clone it may have been but a debut Amstrad title it was too. And a good one at that. It was a polished shoot-'em-up with spells that made it a spot of magic for any CPC gamer. Produced by Steve Turner (interviewed on page 84 of this very issue), it was a sterling and surprisingly original effort.



The Sentinel

■ With 10,000 levels, *The Sentinel* was one huge game. Created by Geoff Crammond for the BBC, this was no less a game for being a port. It reviewed incredibly well and has been acclaimed as one of the best titles of all time, regardless of platform. For that reason it has to be here and must be experienced.



Prehistorik 2

■ As a classic by *Zap't'Balls* creator Elmar Krieger and ported to numerous other machines, *Prehistorik 2* made extra use of the 6128's capacity, not least with the addition of in-game music. Although it was available for 64K machines, it surpassed itself with the 6128 Plus, using additional parallax scrolling graphics.



Sorcery+

■ When you picked up Amstrad literature around 1985, chances are you would see *Sorcery+* looking back at you. Its superlative graphics were used to show off what was being touted as the CPC's killer game, and it was no idle boast, with this disk-based version expanding the original's 40 screens to 75.

TOP FIVE IMPORT GAMES



01. Iron Lord

Coming on two disks and taking up both sides of each, this was one big game. But even though it received 92% in *Amstrad Action*, Ubisoft decided not to release it in the UK.

02. Prohibition

■ Restricted in Germany, *Prohibition* was a shoot-'em-up with Gallic flair, and it was soon released in English. Be aware that the 128K version doesn't work on Plus machines.

03. Orphée: Le Voyage Aux Enfers

■ The first French graphical adventure, *Orphée* impressed with its colourful graphics and myriad locations. It's not the easiest of games, but it is quite addictive.

04. Mandragore

■ This was a popular game in France and one of the first RPGs. Originally produced for the Thomson M05, it was ported to the Amstrad CPC and later given English translations, but it didn't grab the attention in the same way as across the Channel.

05. Sapiens

■ Never released outside France, it's well worth getting your hands on *Sapiens*. It was the CPC's debut open adventure game, set in a prehistoric land in a battle for survival. It could be viewed side-on and in 3D isometric.

IMPORT THESE NEXT



Le Maitre Des Âmes

■ The French sure did love their role-playing games, and this fantasy adventure ticks all of the boxes and really should have been given an English-language release. With the usual wizards, dwarves and elves, there wasn't much of a departure from what you'd expect of an RPG, but it sure was fun.



Fugitif: Les Aventures De Jack Bludfield – Part 1

■ A technically impressive release, players used the cursor keys to get around *Fugitif*'s gaming world and utilised an icon-based system to input commands. It was produced in the CPC's high-res four-colour mode, but the programmers used clever tricks to extend the palette beyond that limit.



La Malédiction

■ Although suffering somewhat in the gameplay department, it is worth getting hold of in order to see the typical Eighties French touch on many of the games produced at around that time. Often they had good ideas and nice graphics, yet were let down by glaring omissions for a text adventure, such as not giving decent descriptions.



Les Passagers Du Vent

■ Although the sequel, *Passengers On The Wind 2*, was translated into English and released in the UK, the debut game was not. It's not a particularly long game, but given that it is based on a cartoon strip, it looks amazing, with graphics that burst from the screen and with a great audio score driving you on.



Alphakhor

■ If you have a grasp of French, you won't want to miss this impeccably presented text adventure by Loriciel. It's not an easy game to track down but it's worth the perseverance, with a mature and intriguing plot about a deadly virus threatening mankind in 2006 that mirrors an outbreak from 1463.

CPC The Collector's Guide

TOP FIVE RAREST PAL GAMES



01. Pang (cartridge)

■ There is no doubt that *Pang* was one of the best cartridge releases, and it sold more than most other games for the Plus and GX4000. But because it is one of the more desirable games, most people keep hold of it, making it relatively hard to track down.



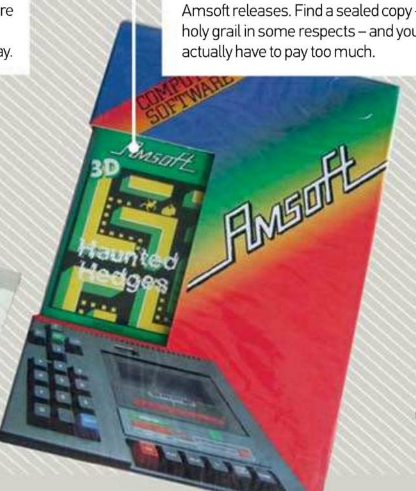
02. Trojan Phaser

■ We know it's not a game, but you'll really struggle to get hold of the Trojan Phaser lightgun. It was used for *Skeet Shoot* and *The Enforcer* and tends to fetch in excess of £100 on eBay.



03. Copter 271 (cartridge)

■ You will find that most of the rare games were launched for the ill-fated Plus and GX4000 mainly because, by this time, most people were moving on. *Copter 271* was, like *Chase HQ*, a late release and fetches a pretty penny on eBay.



04. Haunted Hedges

■ It's not just *Haunted Hedges* that can prove difficult to get hold of but most of the big box Amsoft releases. Find a sealed copy – the holy grail in some respects – and you won't actually have to pay too much.



05. Chase HQ II (cartridge)

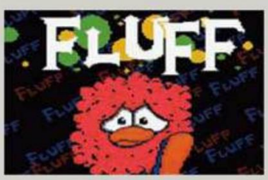
■ For a long time, collectors were not sure if *Chase HQ II* even existed on cartridge, but then one was unearthed by James Bridges. It would have been released at the end of the GX4000's life.

GET THESE NEXT



Qin

■ The last time we saw a copy of *Qin* on eBay, it fetched in excess of £100. It's as hard to find information about it as it is to track down the game itself, but sources in France tell us it's very high on the 'most wanted' list of titles for CPC fans to play, and this desirability must have contributed to its rarity.



Fluff

■ *Fluff* was one of the last commercial releases for the Amstrad CPC, produced by one-man team Radical Software. Although the initial games were sold in white cases, artistic boxes were used later, taking the image of the Fluff character that adorned the cover of *Amstrad Action*. The game barely sold, so finding these will be hard.



Megablasters

■ Published by Radical Software in the UK, *Bomberman* clone *Megablasters* also came in a box and was one of the final commercial games for the CPC. Like *Fluff*, it sold little despite being an amazing game and topping some people's must-play lists. It's worth scouring round on the off-chance you can find it.



The Great Giana Sisters

■ This game was on sale for just a couple of weeks before Nintendo felt it was far too similar to *Super Mario Bros* and so took out a successful lawsuit against Rainbow Arts. So few would have had the chance to snap up the game, and yet it's worth playing. Ironically, in 2009 it finally found a release… on Nintendo's own DS.



Street Fighter II

■ Okay, a red herring. This game was promoted month after month in *Amstrad Action*. It was promised that the game was at an advanced stage and would be due soon. But it never actually appeared on the shelves. Or did it? Anyone who manages to track down the source code would be a hero to the CPC community.

THE JEWEL IN THE CROWN

It's one of the best CPC games of all time, but what marks it out is the packaging – a complex title complete with playguide, keyguide and a novella…







The Game

■ This was Rainbird's first arcade-style game, and it had its work cut out from the start. It was ported from the Atari ST and suffered little in the process. Firebird actually bundled this with *The Sentinel*, *Elite*, *Ace 2* and *Tetris* further down the line.



The Packaging

■ As if to justify the expense, the game came bundled with some useful paper. The playguide was accompanied by a novella written by popular UK author and screenwriter James Follett as well as a guide to the keys. Very much in the *Elite* mould.



The Cost

■ *Starglider* was not cheap. It came in at £15 on tape and £20 on disk and subsequently didn't go on to sell a great deal, relatively speaking. But for a game that earned an *Amstrad Action* Mastergame award with 91%, many felt it was worth every penny.

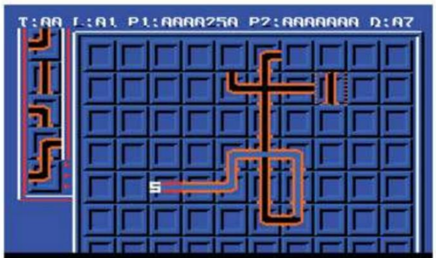
CPC The Collector's Guide

THE AMSTRAD CPC GAMES YOU NEED TO OWN

- 3D Construction Kit
- Abadia Del Crimen, La
- Academy
- Addams Family, The
- Afterburner
- Alien8
- Alphakor
- Arkanoid
- Arkanoid II: Revenge Of Doh
- ATV Simulator
- Auf Wiedersehen Monty
- Autocrash
- Badlands
- Ball Bearing
- Barbarian
- Bard's Tale, The
- B.A.T.
- Batman
- Batman: The Movie
- Beach Head
- Bloodwych
- Blues Brothers, The
- Bomb Jack
- Bomb Room, The
- Boulder Dash
- Bubble Bobble
- Bumpy's Arcade Fantasy
- Burnin' Rubber
- California Games
- Captain Blood
- Castle Master
- Castle Master II: The Crypt
- Cauldron
- Chase HQ
- Chase HQ II (cart)
- Chevy Chase
- Chip's Challenge
- Chuckie Egg
- Colossal Adventure
- Combat School
- Continental Circus
- Copter 271 (cart)
- Crazy Cars II
- Crystal Kingdom Dizzy
- Cybernoid
- Cybernoid II
- Cyrus II Chess



Dizzy


Pipe Mania

- D-Day
- Daley Thompson's Decathlon
- Dan Dare
- Dark Side
- Darkman
- Deliverance: Stormlord II
- Dizzy
- Dizzy: Prince Of The Yolkfolk
- Donkey Kong
- Doomdark's Revenge
- Doors Of Doom
- Double Dragon
- Dragon Breed
- Dragontorc
- Driller
- Dun Darach
- E-Motion
- Eliminator
- Elite
- Emlyn Hughes International Soccer
- Everyone's A Wally
- Exolon
- Exterminator
- F-16 Combat Pilot
- Fantasy World Dizzy
- Final Fight
- Flimbo's Quest
- Fluff
- Football Manager
- Frankie Goes To Hollywood
- Fruit Machine Simulator
- Fugitif: Les Aventures De Jack Bludfield – Part 1
- Gauntlet
- Gauntlet II
- Gauntlet III: The Final Quest
- Gazza II
- Geste D'Artillac, La
- Get Dexter!
- Get Dexter 2
- Ghost Hunters
- Ghostbusters II
- Ghosts 'N Goblins
- Ghouls 'N Ghosts
- Grand Prix Simulator
- Great Giana Sisters, The
- Gremlins: The Adventure
- Gryzor
- Guild Of Thieves

- Gunship
- Hacker
- Hard Drivin'
- Harrier Attack
- Haunted Hedges
- Head Over Heels
- Heartland
- Heavy On The Magick
- Hero Quest
- Hitchhiker's Guide To The Galaxy, The
- Hollywood Hijinx
- Hong Kong Phooey
- How To Be A Complete Bastard
- Hudson Hawk
- Hunchback
- Ikari Warriors
- Impossaball
- Impossamole
- Impossible Mission



Renegade

- Indiana Jones And The Last Crusade
- Indiana Jones And The Temple Of Doom
- Infernal House
- Insector Hecti At The Interchange
- International 3D Tennis
- International Karate
- International Karate +
- Iron Lord
- Italy 1990
- Jet Set Willy
- Karateka
- Klax
- Knight Lore
- Knight Tyme
- Koronis Rift
- Kwik Snax
- Laser Squad
- Lemmings
- Little Computer People
- Little Puff In Dragonland
- Loopz
- Lords Of Midnight
- Lost Caves And The Tomb Of Doom
- Lotus Esprit Turbo Challenge
- Lurking Horror, The
- Magicland Dizzy
- Maitre Des Âmes, Le
- Malédiction, La
- Mandragore

EXTREMELY RARE	VERY RARE	RARE	UNCOMMON	COMMON	VERY COMMON
Games that have less than a few dozen known copies available.	Very hard to come by. Expect to see only a couple of copies per year.	You should be able to source these in a reasonable amount of time.	You won't find them straight away, but you will after a search.	Always just a click away for the average collector.	So common you'll find them in most bundles of games you buy.

- [ ] Manic Miner
- [ ] Manoir De Morteville
- [ ] Marsport
- [ ] Match Day II
- [ ] Megablasters
- [ ] Mercenary
- [ ] Midnight Resistance
- [ ] Myth
- [ ] Navy SEALs
- [ ] Nebulus
- [ ] Netherworld
- [ ] Nigel Mansell's World Championship
- [ ] Night Shift
- [ ] North & South
- [ ] Operation Wolf
- [ ] Orphée: Voyage Aux Enfers
- [ ] Pang (cart)
- [ ] Paperboy
- [ ] Passagers Du Vent, Les
- [ ] Pawn, The
- [ ] Pipe Mania
- [ ] Pirates!
- [ ] Piso Zero
- [ ] Power Drift
- [ ] Prehistorik
- [ ] Prehistorik 2
- [ ] Prince Of Persia
- [ ] Pro Tennis Simulator
- [ ] Prohibition
- [ ] Purple Saturn Day
- [ ] Puzznic
- [ ] Pyjamarama
- [ ] Qabbalah
- [ ] Qin
- [ ] Rainbow Islands
- [ ] Ranarama
- [ ] Red Moon
- [ ] Renegade
- [ ] Return To Eden
- [ ] Revolution
- [ ] Rick Dangerous
- [ ] Rick Dangerous 2
- [ ] RoboCop
- [ ] RoboCop 2 (cart)
- [ ] Rock Star Ate My Hamster
- [ ] Roland In Space



Solomon's Key

- [ ] Roland In The Caves
- [ ] Roland In Time
- [ ] Roland On The Ropes
- [ ] Sabre Wulf
- [ ] Sacred Armour Of Antiriad
- [ ] Sapiens
- [ ] Savage
- [ ] Scapeghost
- [ ] Sentinel, The
- [ ] Seymour Goes To Hollywood
- [ ] Shadow Of The Beast
- [ ] Shufflepuck Cafe
- [ ] SimCity
- [ ] Smash TV
- [ ] Solomon's Key
- [ ] Sorcery
- [ ] Sorcery+
- [ ] Space Crusade
- [ ] Spindizzy
- [ ] Spy vs Spy
- [ ] Starfox
- [ ] Starglider
- [ ] Starion
- [ ] Stroper
- [ ] Stunt Car Racer
- [ ] Super Cauldron
- [ ] Super Off Road
- [ ] Super Robin Hood
- [ ] Supercars
- [ ] Sweevo's World
- [ ] Switchblade
- [ ] Target Renegade
- [ ] Tau Ceti
- [ ] Teenage Mutant Hero Turtles 2
- [ ] Thrust
- [ ] Titan
- [ ] Titus The Fox
- [ ] Tomahawk
- [ ] Total Eclipse
- [ ] Total Recall
- [ ] Trailblazer
- [ ] Trantor
- [ ] Turbo The Tortoise
- [ ] Turrican
- [ ] Turrican 2
- [ ] Untouchables, The
- [ ] Uridium
- [ ] Way Of The Exploding Fist
- [ ] WEC Le Mans
- [ ] Wild West Seymour
- [ ] Winter Games
- [ ] Wizball
- [ ] World Series Baseball
- [ ] Worm In Paradise, The
- [ ] Xor
- [ ] Xyphoes Fantasy
- [ ] Yie Ar Kung-Fu
- [ ] Zap't'Balls: The Advanced Edition
- [ ] Zoids
- [ ] Zork I: The Great Underground Empire

Collector Q&A

In addition to his insane knowledge of the system, Richard Goulstone has an impressive collection



■ What drew you to collecting for the CPC?
I bought a CPC 664 in 1986 as my first 'serious' computer, and have been hooked ever since. It was the Rowan Atkinson adverts on television that originally drew my attention to them. I have owned several over the years, mainly 6128s, up until about 1992 when I sold the last one I had and moved on to a PC. But modern computers are so boring, so once I had the chance to get an Amstrad again in the late Nineties, I jumped at it.

■ How long have you been collecting for now?
Since the advent of auction websites in New Zealand in 1999. I saw people selling CPC stuff really cheap and got enthusiastic all over again. I started off collecting all 8-bit computers and got a reasonable collection together. Then I realised that unless I won the lottery, I had better limit myself to one system, and it had to be Amstrad.

■ What does the Amstrad offer over other 8-bits?
The Amstrad CPC was the pinnacle of 8-bit computers. It had a great all-in-one design, and it came with a real operating system – CP/M. It was easy to use and program, and the manual was very good. All in all, it was the complete all-in-one package with one plug.

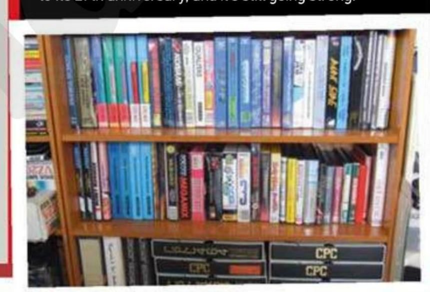
■ What do your family think of your collection?
Not much! My wife wonders why on earth I am interested in 'old' computers. But as it keeps me occupied in one room of the house she doesn't mind too much…

■ What's the most expensive game you own?
Probably an Amsoft disk game, like *Roland In Space*. I've seen some of the rarer ones sell on eBay for £20-30.

■ What's the rarest game in your collection?
I think one of my fully boxed and shrinkwrapped Amsoft titles. Usually, whenever anyone bought an Amsoft game back in the Eighties, the first thing they did was throw out the outer box and plastic insert.

■ What is the cornerstone of your collection?
Definitely my *Amstrad Computer User* collection. An almost complete collection, including issue 1. I must have read each issue ten times, as it captured the essence of the Amstrad CPCs of the time. People who were really interested in the machine wrote it.

■ What advice would you give to other collectors?
Join an online community and share what you have. I am currently uploading anything I have to CPC Wiki that isn't already there. Sites like that are a great way to archive everything and keep it current. The 464 is just coming up to its 27th anniversary, and it's still going strong.



THE CLASSIC GAME

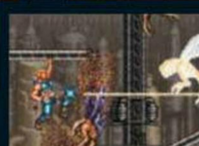


It's without doubt one of the greatest Super Nintendo games of all time, one of the best games in the *Contra* series, and also one of the finest run-and-gun games ever. Oh, and did we mention that it's one of the best games ever too? That it's taken us 89 issues to finally give *Contra III* a classic game analysis is somewhat strange, but the reason lies in the fact that the game is so exceptional that we just assumed we already had. A masterclass in game pacing, set pieces and basically just great level design, from the very minute you start *Contra III* to the sweaty, jubilation-filled second you finally beat it on the hardest setting and see the game's ending, the action is relentless, the challenge high and the gameplay intense. The year is 2636, and Stuart Hunt is helping two commandos, Sully and Jimbo, win an epic alien war.

THE ARMOURY



Machine gun
The default weapon in the game. It's pretty powerful and really quite effective at taking out much that the game throws at you.



Laser
As laser-based weapons do, this fires a concentrated line of powerful radiation. It's highly powerful, but using it requires a good aim.



Spread gun
Though the weakest weapon in the game, the spread gun makes short work of enemies attacking from different heights.



Crush missiles
Blue in colour, these are the most powerful weapons in the game. They explode on contact, and are really effective against bosses.



Flamethrower
The flamethrower is an effective close-quarters combat tool that is great for taking down bosses and cindering weak spots.



Homing missiles
Moderately powerful homing missiles will hunt enemies down. It's a really effective weapon against the airborne aliens.

MEMORABLE MOMENTS

WHY IT'S A CLASSIC



Contra just got better

The original *Contra* reinvented the run-and-gun genre, introducing many elements that countless games adopted. The follow-ups prior to *Contra III* offered a decent helping of action, but they didn't measure up to the original. *Contra III*, however, marked a giant leap forward. It was everything you would expect from a *Contra* game, but with bigger weapons, bigger explosions, bigger bosses, a new post-apocalyptic setting and a motorcycle level. Set piece after set piece, the game was a tour de force of imagination, deft level design and special effects that hasn't aged a single day.

BEST LEVEL

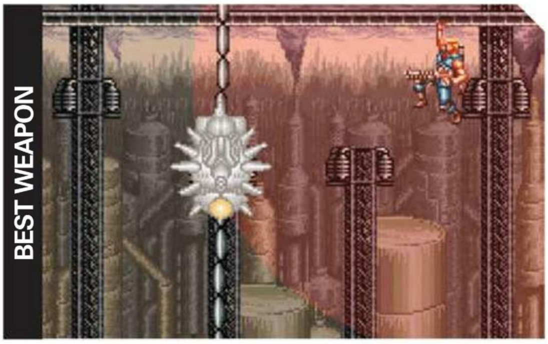


Start as you mean to end

With so many memorable moments in *Contra III*, picking just one was impossible. As the opening stage is a great example of how to grab a teenager's attention and make them part with birthday money, we had to mention it. Within the first few minutes you're gunning down aliens and mutant dogs, hopping into a tank to flatten foes, sampling nearly all of the weapons in the game, dodging a plane as it bombs the city, jumping through the flaming ruins while taking out a wave of winged aliens and finally facing off against a giant, bullet-spewing alien tortoise. It's one of the best opening levels of any videogame.



BEST WEAPON



Smart bomb

Many fans will have their favourite weapon. Some love the laser. Others will like the weaker but lovely spread gun, as it makes killing foes an absolute breeze. There are others who will like the flamethrower, as it's great for when you get up close. Therefore, picking a best weapon is a bit of a thankless endeavour, and one we chickened out of by virtue of us going with the smart bomb. It might look like a metal turnip, but release it into the game's atmosphere and see the screen turn hazy, killing grunts with ease and knocking a large chunk off the energy of the game's bosses.

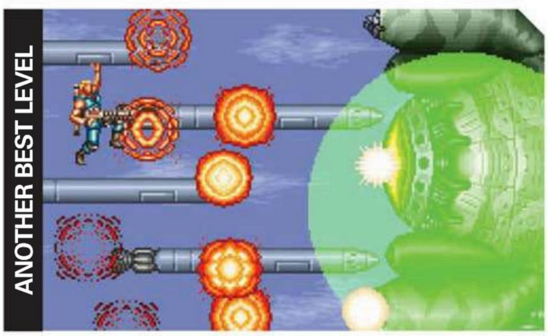
BEST BOSS



The massive Terminator

There really was only one boss we could highlight here. And typical of memorable 16-bit bosses, it is something that didn't exactly err on the side of caution as far as copyright was concerned. The giant T-800-alike that rips through the level's wall at the end of the third stage is a tricky one. First, you see his claws pierce the wall, pulling it apart as if it was made of tinfoil, before seeing his beaming red eyes glowing in the darkness. The beast then emerges, firing lasers from its eyes, lobbing bombs into the playing field and breathing fire too. The only thing it doesn't do is ride a motorcycle and shoot up a police station.

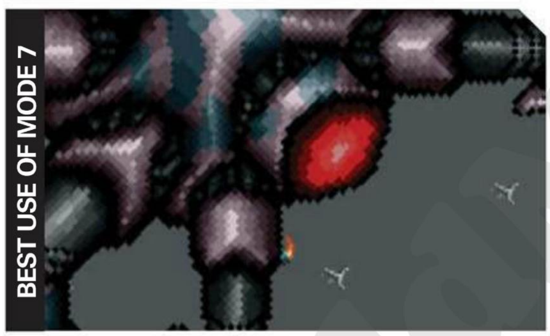
ANOTHER BEST LEVEL



Motorcycle

Given that there are so many great action set pieces in *Contra III*, we had to give a mention to another of its fantastic levels. The motorcycle stage deserves a look in, as it's basically just one giant action set piece. The stage begins with the player astride a 2636 era Ducati, blasting flying aliens before a giant frigate appears, its undercarriage primed with heavy ordnance. Survive this vicious gauntlet and the ship takes to the air, you chasing after it. This leads on to the most insane bit in the entire game: blasting the ship's glowing arse while hopping between missiles being fired at it.

BEST USE OF MODE 7



Arachnophobia

From the map in *A Link To The Past* to pseudo-3D like *F-Zero* and *Pilotwings*, the cream of early Super Nintendo games used the console's Mode 7 technique to show off the power of the console, and *Contra III* was no different, proving a great showcase of the versatility of the effect. It was used to create dazzling explosions, two top-down levels, and also several bosses. The first Mode 7 boss is a large robotic spider that scuttles along the floor before jumping into the air, scaling bigger and filling the screen before disappearing, and then making a quick descent in a bid to crush Sully and Jimbo.



IN THE KNOW

- **PLATFORM:** SUPER NINTENDO
- **PUBLISHER:** KONAMI
- **DEVELOPER:** IN-HOUSE
- **RELEASED:** 1992
- **GENRE:** SHOOT-'EM-UP

What the press said… ages ago



Mean Machines 95%

Anyone who doubts the abilities of the Super NES should take a look at this – it's unbelievable! The graphics, sounds, special effects and varied, highly addictive gameplay are all absolutely outstanding.

What we think

Standing alongside *Gunstar Heroes* and *Metal Slug*, *Contra III* is the pinnacle of run-and-gun gaming, and has still yet to be bettered. It's an outstanding game.

The Making Of...



With his games rivalling Ultimate in quality, looks and imagination, programmer Stephen Crow became a legend by politely playing the revered developer at its own game. Stuart Hunt chats to Stephen about his Spectrum classic Starquake, finds out how he managed to squeeze so much power from the Spectrum, and discovers the full story behind his game's unfinished sequel

D*ropzone* borrowed elements off *Defender*; *Namtir Raiders* was essentially *Space Invaders*; *Tehkan World Cup* was to thank for bringing *Sensible Soccer* into our lives. It's a classic tale that has been heard many times in these pages. In the same way that a musician might be inspired by their favourite guitarist, or an athlete by a gold medallist, many programmers would teach themselves to code by looking to the games they enjoyed playing and that had often turned them onto gaming in the first place to inform their work – replicating, cloning and building off these games to hone and cultivate their own skills and creativity. And so, seeing Ultimate games as the pinnacle of Spectrum gaming, Stephen Crow became greatly influenced by the Leicestershire developer.

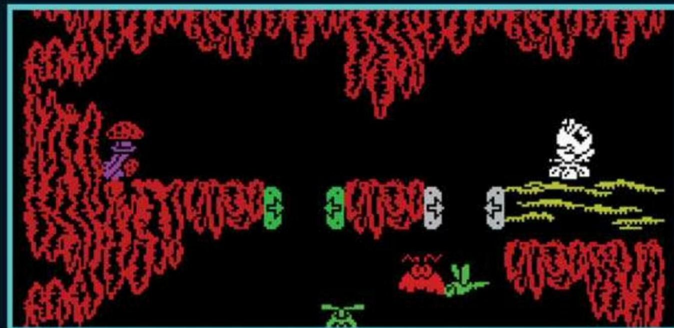
Stephen's first Ultimate-inspired game was the top-down maze shooter *Wizard's Lair*, a game he designed by combining ideas taken from *Atic Atac* and *Sabre Wulf* – though amazingly, when you consider how similar both games look, Stephen never actually owned the former. After finishing *Wizard's Lair*, he was left to find a publisher for his game and a new project to get stuck into next. After turning down an offer from Thorn EMI, Stephen decided to go with Bubble Bus Software, which had just started up in his hometown of Tonbridge. It was also around this time that he spotted a brand new Spectrum game from Ultimate in a magazine.

"I saw a picture of *Underwurlde* and thought it would be cool to work on a huge side-on map game next," Stephen explains. "It seemed to open up a lot more gameplay possibilities, And that's basically what inspired me to do *Starquake*. I saw one picture of *Underwurlde* in a magazine and



» [Spectrum] Steve on the Olly the octopus sprite in the game: "Olly was simply a cartoon character I used to draw at school. Once I stuck a large picture of Olly up during a maths exam and got a detention for it."

"If I ever did write another videogame, it would certainly be Starquake 2"



» [Spectrum] The easiest way to get around is to use these hover pads. However, getting BLOB off them could be difficult.



IN THE KNOW

» **PUBLISHER:** BUBBLE BUS SOFTWARE
» **DEVELOPER:** STEPHEN CROW
» **RELEASED:** 1985
» **GENRE:** PLATFORM

wanted to do something similar, but I wanted to set it in space and for it to involve technology. I never owned *Underwurlde*. I don't even think I ever played the game; I just sort of understood what the premise of the game was and worked from there, from seeing a screenshot."

Like *Wizard's Lair*, *Starquake* had a second Ultimate influence – albeit one that was pretty well concealed. "I am not sure anyone ever picked up on this, but the inspiration for BLOB came from the *Lunar Jetman* cartoon in *Crash* magazine at the time," Stephen reveals. "I just loved *Crash* magazine. Before I even got a review in the magazine of any of my games I would read *Crash* every month. It seemed like the people at the magazine had a really good sense of humour. Well, I remember reading the *Lunar Jetman* cartoon each month, and seeing this little robot guy who was a background character. It wasn't even a sidekick – sometimes the artist just drew that little robot guy and it was a real minor part of the story. I thought I'd try a character based on him and see what it looked like. It looked really goofy and I wanted the main character to have a goofy, humorous feel. Also, a sphere was an ideal shape for a character to show rotation as it turned from left to right."

Taking inspiration from the little bug-eyed droid that occasionally appeared in the panels of John Richardson's popular comic strip, *Starquake* started life with a central hero from the outset. BLOB (Bio-Logical Operated Being), as Stephen christened him, was the very first element of *Starquake* to be designed and created. As a result, BLOB informed nearly all of the gameplay and design choices in the game.

"I remember just having a straight platform at the bottom of the screen, and I had BLOB. I animated him rotating and then his legs moving, and him rotating and walking back and forward, and just kept on playing with that until it felt right," explains Stephen. "After that I started coming up with other abilities he could do. The next thing I did was to get him to go into the elevators, going into them and how he came out the elevators and getting that feeling right. So I built a basic elevator route, where BLOB would walk in, get drawn up the elevator and then jump out. Then I worked on the gravity and how fast he'd fall, repeatedly running back and forwards, going up the elevator, jumping out of the top, watching him fall, and kept tweaking the numbers until it all felt smooth. All the other things, such as the zapping rays and the teleports and the jet pads, I just kept adding and adding."

Stephen built his *Starquake* construction set over the course of a few months and used it to test and hone BLOB's abilities and the various game mechanics until he was satisfied with how everything in the game felt. By the time he had included all the features that he wanted in the game – a process of around six months – his testing ground had swelled to around 16 screens, and BLOB was able to generate and make use of his own platforms, was trained in the art of using elevators and teleportation, and could even hop onto rocket pads and fly around the playing field.

This methodical approach to *Starquake*'s design, which Stephen had first applied to *Wizard's Lair*, would prove immensely beneficial later on in the game's development. Once all of the aspects of the game



» [Spectrum] Given that the planet is a bit rickety, it kind of makes sense for a large portion of it to be made from molecules.

STARQUAKE



» Stephen at Blizzard Entertainment.

» Steve says the fallen spaceman was included to create interest: "Maybe BLOB was not the only one in the spacecraft when it crash landed. I always loved the movie *Silent Running* when I was little – maybe this fallen astronaut was BLOB's master?"





» [Spectrum] *Crash* called it one of the best Spectrum games.

had been tested and had been proven to work inside the confines of the construction set, expanding it out into a huge map was a time-consuming but relatively simple task.

"I created the whole world in about four to six weeks – it wasn't long. I set myself a target of 20 screens a day and that's all I focused on. I knew at that point that all the gameplay worked and so, when I was creating it, all I was doing was putting the gameplay elements into different combinations to make it fun for players. For the look of the world I came up with things like chemistry models, as I wanted to make it look as if the planet was made up of molecules, and also incorporated rocks and weird-looking plants. I just drew inspiration from lots of different things. Because it was an alien world I was basically free to do whatever I wanted, which is kind of the nice thing about sci-fi."

By the time Stephen had moved on to *Starquake*, he had become far more proficient at programming on the Spectrum. Learning how to program with his earlier games, *Laser Snaker* and *Factory Breakout*, then perfecting his skills with *Wizard's Lair*, when he came to write *Starquake* Stephen found that he had much more time to concentrate on the gameplay and also better understood the inner workings of the Spectrum and how to get the best from it.

"To create the game I used a Tatung Einstein computer linked to a ZX Spectrum via a custom high-speed RS232 cable. I would write and assemble the program code on the Einstein and then download it to test on the ZX Spectrum via the link. The Spectrum hardware was very basic and didn't have anything like hardware sprites. The C64 had hardware sprites. I can't remember if the Amstrad did but the Spectrum did not, and so with the Spectrum everything had to be done by your own program; it had to remove all the pixels of the sprite and then move it to the new position and then redraw every pixel back onto the screen. That took a lot of time. The sprite routine alone would probably take up a third of all the processing power while the game was running, and that routine was so important that I must have rewritten my sprite-drawing program a dozen times. I'm not joking – you would go through and think of another way. Actually, every machine code instruction took up several T states [time states] and I had a book that told me which instruction took how many. Some would take up four time states on the Spectrum – that was the shortest instruction – while others could take up to 16, so for every line of code I looked at how many time states it used and tried to figure out ways of writing the sprite-drawing routine so it would take less time states and thus be able to draw more sprites or draw them quicker."

Stephen knew that for an ambitious game like *Starquake* to work and be a success its world had to animate smoothly. To achieve this he locked the game's frame rate to always run at 50 frames per second. This basically meant everything in the game – the sprites, game logic, keyboard commands and music – would refresh in a single frame, 50 times every second.

"A lot of games at the time were running at 25 frames per second and it just didn't give you the same feel, I felt. It just didn't feel as smooth," says Stephen. "At the time Ultimate games were the benchmark of quality and smoothness, and I felt any game I created had to at least measure up to that. What is interesting is the way that those old-fashioned tube



DEVELOPER HIGHLIGHTS

WIZARD'S LAIR (PICTURED)
SYSTEMS: SPECTRUM, CPC, C64
YEAR: 1985

EARTHWORM JIM
SYSTEM: MEGA DRIVE, SUPER NINTENDO, GAME BOY, SMS, GAME GEAR, PC
YEAR: 1994

WORLD OF WARCRAFT (THE BURNING CRUSADE, WRATH OF THE LICH KING AND CATACLYSM)
SYSTEM: PC, MAC
YEAR: 2004-2010

THE KIDS WERE ALL RIGHT

SCORING AN ASTONISHING 96% in *Crash* magazine, their review of *Starquake* was decorated with impressed comments like: "Though the game is very Ultimate-esque, you soon find that things are a lot more professional, taking the route that ACG should have gone presentation-wise."

As a fan of both *Crash* magazine and Ultimate, for Stephen such praise must have been like winning the lottery twice. Well, this wasn't the first bit of encouraging feedback that he received about the game – Stephen, it seems, was something of a neighbourhood Doc Brown.

"I was 20 at the time I wrote *Starquake* and kids a few doors down from me all had Spectrums and they were always asking me how *Starquake* was coming along. So I told them when I finished it I would give them a copy of the game. A few days after I finished it, I gave them a copy and they were the first people to ever play it – this was a month before it came out in the shops – and the feedback I got from them was that they loved the game. It was at this point I thought *Starquake* could be a really good game. So that was interesting, getting that first feedback from those kids down the street."

» [Spectrum] The world of *Starquake* still looks wonderfully vibrant, even today.





» [Spectrum] The planet's inhabitants aren't very appreciative of BLOB's efforts to save them all.



"I never owned Underwurlde. I don't even think I ever played the game"

televisions worked, as it would start drawing the picture from the top, and draw every horizontal line all the way to the bottom. And above the top of the screen there was something called a VBLANK area, where it started the frame but nothing started drawing yet – I believe they used it for things like Ceefax. Anyway, how I programmed *Starquake* was as soon as that frame started, before the television had even started drawing the top line of the display, I drew all of the sprites first so that before the television had gotten to drawing halfway down the picture the sprites were removed and redrawn. That meant nothing ever shimmered or flickered. If you hadn't redrawn the sprites before the time the television had gotten to that sprite, it wouldn't appear right. It would flicker because it was getting erased and redrawn as the television scanned across it."

A common bane for many Spectrum programmers was its poor colouring-in skills. The machine was hamstrung by a limited colour palette, and when several moving colours shared screen space it often caused sprites to clash like bad-tempered Eighties sportswear. So how did Stephen succeed in making *Starquake* look so colourful and get multiple colours to behave so well on the machine?

"What I did is every time I designed the graphics or any of the stationary graphics – the things that don't move on screen – I thought about how the colour was going to work. Basically, you could only have a single background colour and a foreground colour in any 8x8 square. The colour resolution on the Spectrum was far lower than the actual pixel resolution, so all the stationary graphics were very carefully designed around this limitation so that I could make things look colourful but not get those awful blocky squares of colour that you saw in some games. With all the moving sprites, as you can't control when a green alien moves in front of, say, a yellow alien, you had to think about which one would take precedence, and there wasn't really any good way of doing that. I think I always gave the precedence to BLOB so that he always stayed white, even when something was on top of him. There were some things you could get around and other things you just couldn't."



» [Spectrum] BLOB uses these to be warped around the world.

Worse than the colour issue, though, was the sound. The Spectrum didn't have any hardware sound at all, and this made writing music on it a convoluted process. Instead of a sound chip, the Spectrum had a speaker that could be positioned in either an in or out arrangement to create different sounds. It was primitive, but Stephen, once again, found a way to get the best out of it.

"By that time I had a Yamaha keyboard and would try to compose all of the music on that and then try to program it into the actual game. I just started coming up with melodies that sounded pretty good, and if I came up with a tune that sounded good I would use that. One trick I did use with the music is because the Spectrum speaker could only move in or out, basically what that creates is something called a square wave, and so the Spectrum had a very



» [Spectrum] To partially solve the problem of colour clash, Stephen always gave precedence to the BLOB sprite in the game.

CONVERSION QUAKERS

CONFIDENT THAT THE game would be a hit, Bubble Bus converted *Starquake* to a large number of systems, including the PC, MSX and even Atari 8-bit computers. Stephen tells us what his involvement was in the various ports that the company released.

"I was very much involved on a day-to-day basis at Bubble Bus. I would definitely go in there at least once a week and check and make sure that the feel of the game was right, and talk to the programmers and look at the code.

"I can't remember if I did the graphics for the C64 version but I definitely did the sound for that one, which was an absolute joy because you had a real synthesizer. It was still a challenge, though, because I had to sort of emulate that very specific Spectrum sound on the C64, and so I remember having to come up with a program for the machine that could emulate some of the sounds on the Spectrum."





» [Spectrum] Stephen thoughtfully included teleportation terminals to make getting around the huge world much easier.



» *Crash's Lunar Jetman* comic provided the inspiration for BLOB.

POPULAR MECHANICS FOR KIDS

Stephen reveals the thinking behind some of *Starquake*'s many innovative gameplay mechanics.

BLOB UTILISING ROCKET PADS
"Pretty standard feature, but I didn't want to give BLOB the 'Superman' ability throughout the whole game, so the rocket pads were limited for travel between launch sites only. Also, with a rocket pad BLOB became bigger and thus could not fit through small spaces, which further limited where you could go with a rocket pad."



BLOB'S ABILITY TO GENERATE PLATFORMS
"I don't know where I got the idea but the concept of having a platform that would dissolve after a few seconds worked really well and added a puzzle element to the game."



CHEOPS PYRAMIDS
"My friend Justin Whittaker, who programmed games for Atari for a time, built a replica Cheops pyramid, which apparently had crazy properties such as preserving food – or mummies. I thought I would incorporate them into the game because they were probably from another planet!"



> **"Stephen was in the middle of a bidding war as he considered which publisher to go with"**

particular sound to it – it was sort of harsh. A note is the distance between the peak of one wave to the peak of the next, so I used a technique called pulse width modulation, and what that did is even though the point from the speaker being out to being out again would be the same difference, I would vary how much time the speaker would be in, so sometimes the speaker would be out for just a short period of time, then I would move it back in again and hold that for a long time, and then during the course of the note I would change it to have the speaker being out for a longer time and only in for a short time. So it would still play the same note but it kind of gave it this chorus-like tone – some people thought it was even playing two notes at the same time, but it actually wasn't. It gave the tone of the music a sort of nice synthesised sound that was much more interesting than the regular Spectrum sound."

The success of *Wizard's Lair* before it meant Stephen had no problem finding a publisher for *Starquake*. In fact, two companies showed enthusiastic interest in publishing the game: Bubble Bus Software, which had previously published *Wizard's Lair*, and Hewson Consultants. Stephen was in the middle of a bidding war as he considered which company to go with.

"It was interesting because Hewson had a lot of money and I'd never worked with them before, and Bubble Bus didn't have a lot of money but they had a lot of heart. In the end I think Hewson offered me something like four times more money than Bubble Bus were offering, but I decided to go with Bubble Bus because they were just so passionate about trying to make the game work and sell as many copies as possible. And I think they did a pretty good job with the game, but I also think they made some pretty poor choices. I think all of the *Starquake* adverts came out in black and white while another game they published a few months later – which wasn't anywhere near as good, I felt – they used full colour ads for. I just thought, 'Well, why did you do that when you didn't for *Starquake*?' In the end I didn't fall out with Bubble Bus but I did think they were making some poor choices, and that's what made me go with Hewson for *Firelord*. But the good thing about Bubble Bus was they converted *Starquake* to just about every platform at the time, so it got out there to a lot of different machines, which was good."

Firelord was Stephen's first game for Hewson and also the final one that he would do all of the programming and graphics for. Well, his final finished game anyway, as shortly after wrapping up work on *Firelord* he began writing a sequel to *Starquake*, incorporating many of the ideas and features into the game that he was unable to include in the original.



» [Spectrum] *Starquake* featured a wide range of objects and devices for players to experiment with.



» [Spectrum] BLOB might be small but he was certainly a versatile hero, able to generate and make use of his own platforms.



» [Spectrum] With Elite Systems having released the original on the iPad recently, perhaps BLOB has found his new home.

"Basically you were very limited with the amount of memory on the Spectrum, so you had to really pick and choose. Some of the features I wanted to have were to have BLOB roll up into a ball and roll down things, which we eventually saw in *Sonic The Hedgehog*, and a pinball sort of thing where you'd fall onto a spring pad and bounce off it – things like that. I just wasn't able to do those things because of time constraints. I basically had to get the game done in time for Christmas, and also the limitations on the amount of things you could put into one game. When I started work on *Starquake 2* I started playing around with some of those features. Another thing I worked on for the sequel was a tube that BLOB could run into and it sort of acted like a cannon, so you could run into this pipe and, when you were inside, it would shoot you out. So these would be around the level and that was going to be a new part of the gameplay, but I never finished working on *Starquake 2*. I only got about three months in and then abandoned it."

So why was the game abandoned? "I think I was a bit burned out after writing *Firelord*. I was under a lot of pressure to finish it before Christmas. Back then you kind of worked on your own; you were in your own little isolated bubble. What happened was I started working on *Starquake 2*, and I was making progress; I built the sandbox of the new features and things BLOB could do, and that was all going pretty good, but I just wanted to take a break for a bit, and I think it was Andrew [Hewson] who suggested I spend a couple of months doing some graphics on another game, and that sounded like fun. I enjoyed it so much that I just kept on doing that, and took on more and more work doing graphics for other games and never got back to programming *Starquake 2*."

Though that long-term break from programming harmed any chance of *Starquake* receiving a sequel, changing focus to work on graphics certainly didn't harm Stephen's career. His artistic talents saw him relocate to California to work on a number of big and original titles, including *Earthworm Jim* for Shiny Entertainment and *Skullmonkeys* for claymation game studio The Neverhood. Still living in California today, Stephen now works for Blizzard Entertainment, where his work is viewed daily by millions in the massive online universe of *World Of Warcraft*.

Of all the titles Stephen has worked on over the years, though, *Starquake* remains his favourite. In fact, such is his fondness for the game that he doesn't rule out the possibility of one day revisiting the series again, picking up where he left off at Hewson all those years ago and resurrecting that *Starquake* sequel he sadly never got the chance to finish.

"If I ever did write another videogame it would certainly be *Starquake 2*," Stephen confirms. "I have a friend, Nick Jones, who I worked with on *Earthworm Jim*. He's actually working on a little pet project right now, so I was thinking of maybe doing something like that with him, but in a couple of years' time when I've got a bit more time on my hands. Doing something like that with him – he would do the programming, I could do all of the graphics, and we could design it together – I think would be a really fun project to do. If I won the lottery tomorrow and didn't have to work, that's what I would do."



» [Spectrum] Your mission is to help BLOB retrieve the parts needed to stop the planet from imploding and destroying the whole universe. No pressure, then…



» [Spectrum] The elevators in *Starquake* were an idea taken from Stephen's earlier game, *Factory Breakout*.

Future Classic



Modern games you'll still be playing in years to come





INFO

- **» Featured System:** Game Boy Advance
- **» Year Released:** 2003
- **» Publisher:** Sega
- **» Developer:** Hitmaker/Treasure
- **» Key People:** Hisao Oguchi (executive producer), Tetsu Okano (director), Naoki Kitagawa (main designer)

GO DEEPER

- **» *Omega Factor* meshes different series and themes of Osamu Tezuka.**
- **» This isn't the only licence Treasure has worked with, dabbling with *Tiny Toon Adventures*, *Bleach* and even McDonald's.**

02. ASTRO BOY: OMEGA FACTOR

Channelling the talents of Treasure and Hitmaker, Astro Boy weaved the creations of Osamu Tezuka into an accessible and impressively experimental shooter-adventure

THE BACKGROUND

Developed to coincide with the 40th anniversary of the anime version of *Astro Boy*, the iconic Japanese manga character that helped bring this brand of visual storytelling to the West, *Omega Factor* celebrates the legacy of the friendly robot boy. Even though co-developer Treasure's reputation is in hardcore arcade games, *Astro Boy* is very much targeted at a wide audience; as such, the generous difficulty settings and relatively light-hearted storyline are a left-field turn from other Treasure games.

While Astro Boy himself is the only playable character, Sega, Treasure and Hitmaker opted to make the overall arc of the story a tribute to creator Osamu Tezuka, broadly encapsulating a large volume of the *Astro Boy* canon. *Omega Factor* was crafted as the ultimate experience for fans of the character – while it doesn't follow any specific storyline from the manga or anime, the sheer number of cameos and variety of settings means that it explores each cornerstone of what makes the character so enduringly popular.

The pairing of the two studios, which had independently produced top-quality titles in the arcade shooter vein, resulted in a wonderfully constructed depiction of the 59-year-old icon and the futuristic universe he inhabits.

THE GAME

Any discussion gamers have about quality licensed games invariably veers towards the likes of *GoldenEye* and *Knights Of The Old Republic* – yet, while they are among the most high-profile of games based on movies, TV shows, comic books and other properties, they're by no means the only ones. We'd be surprised if there's a videogame that better captures the appeal of the fictional universe it depicts than *Astro Boy: Omega Factor*, a jam-packed, compulsively replayable arcade-style shooter that completely deviates from the norm within its genre.

Even though it's all obviously quite light, Saturday morning kids' TV fare, there's a lot of story in *Astro*

Things of note



Failure to match

To tie in with the already forgotten 2009 *Astro Boy* CGI movie, publisher D3 tried and failed to emulate the success of *Omega Factor* with its own game based on the series.



PS2 bellyflop

A PS2 *Astro Boy* game was released at the same time as *Omega Factor*, developed by Sonic Team, but it was critically panned despite being rather pretty.



Playing with style

It's not just identikit, skill-based shooting that players have to contend with – some levels take place in the dark while others are side-scrolling arcade outings.



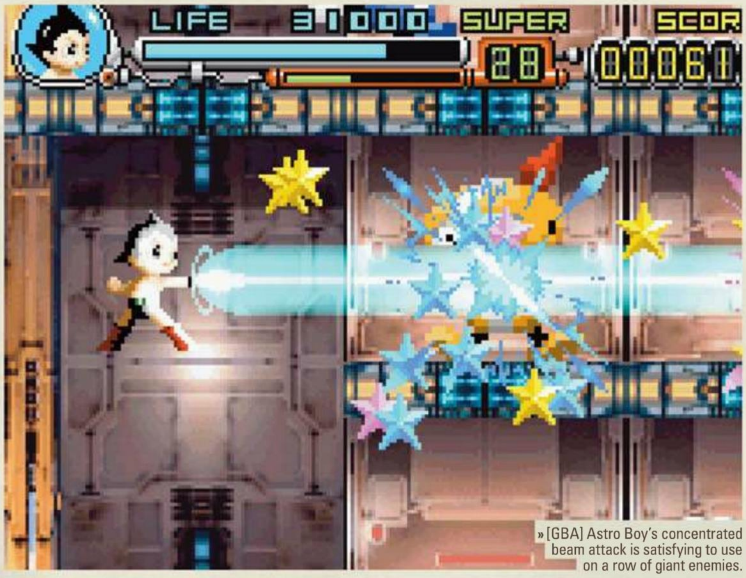
Sense of humour

There's nothing odder than a sub-boss that is a duck, a rabbit and a horse riding in a big tyre. *Astro Boy* has a fair amount of comic relief to go with the robot massacring.



The sound of progress

Progression is linked to exploring the environment and meeting new characters, not combat. The vast majority of them are easy to find. Others, not so much.



» [GBA] Astro Boy's concentrated beam attack is satisfying to use on a row of giant enemies.



» [GBA] The game's opening level includes background references to Sega and Treasure.



What the press thought

Cubed3.com
Score: 9/10
"Treasure has hit the jackpot with this little gem. *Astro Boy* melds shooting, platforming and a bit of arcade action."





IGN.com
Score: 8.8/10
"Even with its flaws, the design and mechanics are so well-tuned that it's hard not to love *Omega Factor*."

Boy. A revolving door of colourful characters means it's heavier on narrative than previous Treasure titles, yet despite this, it's completely open and easy to grasp for anyone new to the character. The basic gameplay is a lot like *Gunstar Heroes* and just as fun, yet the progression is totally different.

Each time you encounter a new character within a level, whether they're part of the story or hidden away, you gain an experience point to increase Astro Boy's power, health and so on. Typical of Treasure's titles, there are frenetic boss battles to overcome, but despite this you can blast your way to the end credits in an evening. What do you think happens after that? Closing credits and cheerful ending?

Well, you lose. Few titles have the daring to let you beat the final level and tell you that you've still lost, let alone a game based on a massively popular character, but that's exactly what the story in *Astro Boy: Omega Factor* does. There's no resolution the first time around – you have to fight for it.

See, upon beginning the game again as part of the time-travelling story, you're offered a level select to go back in time and correct Astro Boy's mistakes, piecing together the wider mystery of the story while also touching on the rather sad yet hopeful origins of the protagonist. Wonderfully, this second playthrough offers a whole heap of new levels and bosses that weren't there to begin with.

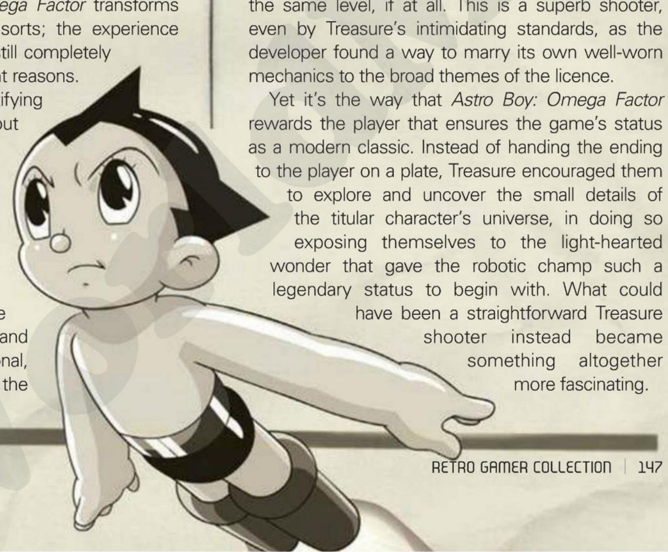
To really get to the end, though, you have to persevere and find all the secret characters hiding in bins, behind doors and all manner of other bizarre places. Shooting is no longer the point of the experience, then, which at that point has become second nature. Instead, *Omega Factor* transforms into an action-adventure of sorts; the experience changes entirely, yet you're still completely invested in it, now for different reasons. This is an enormously gratifying way to invoke replay value out of the game.

When that final ending arrives, the sense of reward is huge – it suddenly dawns on you that the first playthrough was really only the opening chapter of the game. While it may have the trappings and basic gameplay of a traditional, sophisticated Treasure game, the way the story unfolds is experimental and very enjoyable as a result.

WHY IT'S A FUTURE CLASSIC

Due to the smart way the story is put together, it's easy to get swept along by *Astro Boy* without any prior knowledge of the character – licensed games in future are unlikely to accomplish accessibility on the same level, if at all. This is a superb shooter, even by Treasure's intimidating standards, as the developer found a way to marry its own well-worn mechanics to the broad themes of the licence.

Yet it's the way that *Astro Boy: Omega Factor* rewards the player that ensures the game's status as a modern classic. Instead of handing the ending to the player on a plate, Treasure encouraged them to explore and uncover the small details of the titular character's universe, in doing so exposing themselves to the light-hearted wonder that gave the robotic champ such a legendary status to begin with. What could have been a straightforward Treasure shooter instead became something altogether more fascinating.





In the chair with...

ALLAN ALCORN

Allan Alcorn was there at the very beginning of videogames. He created Pong, the arcade industry's first hit, and had a pivotal role at Atari through the Seventies, watching it grow from a garage operation to a billion-dollar company. Paul Drury gets to call him Al

He may be best known for creating *Pong*, but Allan 'Al' Alcorn also had a hand in many other pioneering products. As vice president of engineering at Atari, he oversaw such early successes as *Tank* and *Breakout*, before helping the company move into the consumer market. His work on the ground-breaking VCS saw Atari become the dominant force in gaming until the industry crash of the mid-Eighties brought the party abruptly to an end. We talk to him about wire-wraps, hot tubs and what really happened at Andy Capp's Tavern all those years ago…



RETRO GAMER: We want to start by taking you back to September 1972 and Andy Capp's Tavern in Sunnyvale, California, the location of the very first *Pong* machine. Did you personally lug the thing over there?

AL ALCORN: Nolan [Bushnell] and I took it over after work, on a Monday or Tuesday I think, because the cabinet was built by Ted Dabney over the weekend. It was in a side room with about four pinball machines and I remember there was an original *Computer Space* right next to it. That prototype was a tabletop machine, with just the word *Pong* on, a coin slot and no instructions. We popped it on top of a wine barrel, bought a beer and watched what happened.

RG: In the book *Zap! The Rise And Fall Of Atari*, there's an incredibly detailed description of how two of the regulars put in a quarter and slowly worked out how to have a rally. Then everyone in the bar had a go, people were queuing up to play it the next morning and the machine crashed that night because it was so full of quarters…

AA: Unfortunately the guy that wrote that book [Scott Cohen in 1984] never travelled west of the Mississippi river. Many of the facts and names in that book are wrong, which is kind of sad, as it was great to have someone write about what we'd done, but the guy just based it on articles he'd read and just made stuff up.

RG: So what really happened that night?

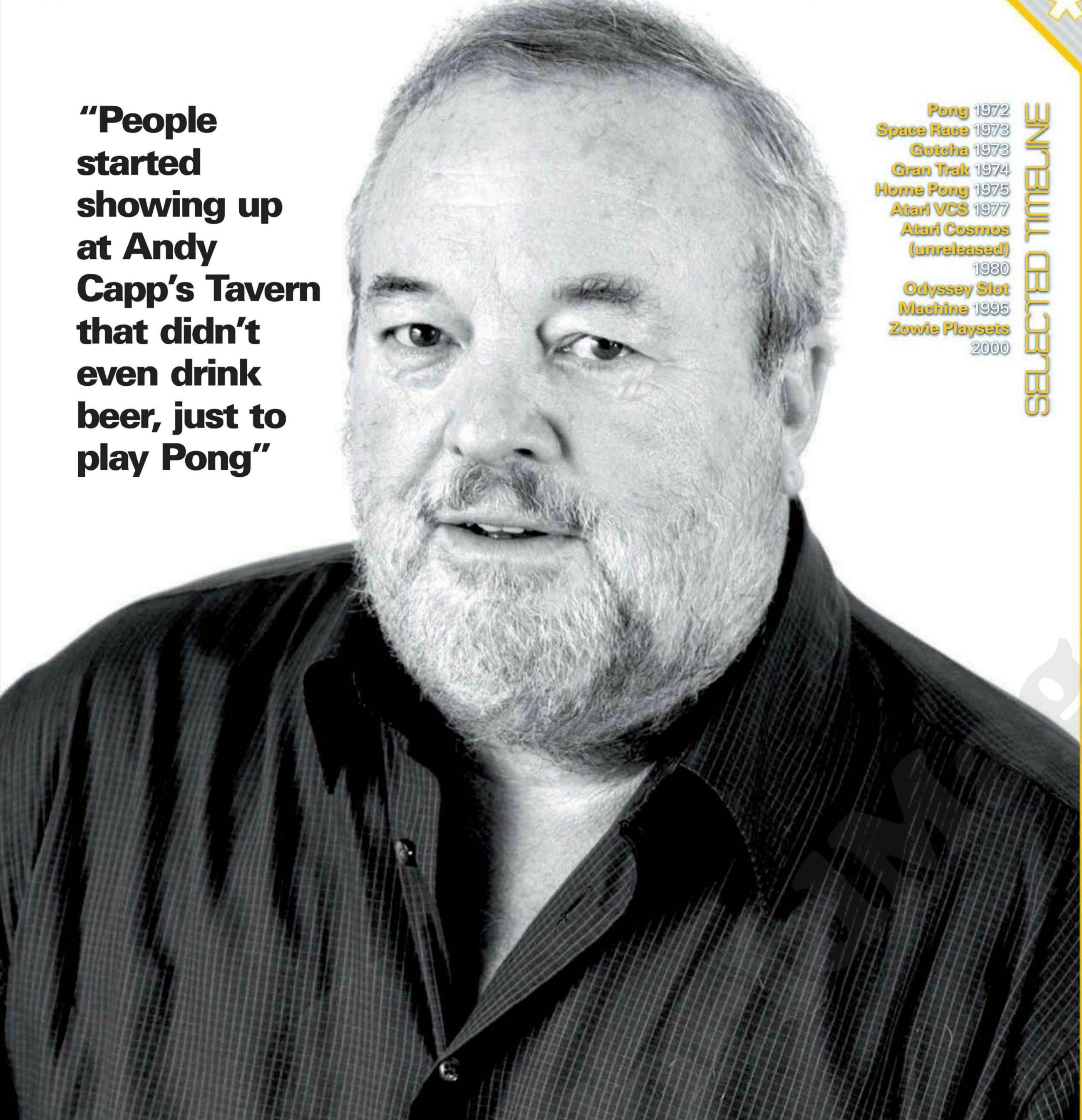
AA: In the half an hour it took to drink our beers, a couple of guys came over and played the machine. They managed to play a game – it didn't need instructions, it was so obvious what you had to do. Nolan went over and said, "What do you think?" They started bullshitting right away, saying, 'Yeah we know the guys who made this.' I was thinking, 'Why don't you save the bullshit for the ladies?' I guess we were in Silicon Valley and nothing surprised these guys. I don't think it got played again that night.

RG: So you didn't get an angry call from the bar owner the next day saying the machine was broken?

AA: Yeah, that's bullshit too. When we started Syzygy [Bushnell and Dabney's original company that became Atari] we had a route of about 50 pinball machines and driving games that Nolan had bought with the royalties from *Computer Space*. We had them at maybe 20 locations and I learned a lot about arcade machines from doing that route. Andy Capp's was one of our better locations. We knew the owner, Bill Gattiss, and he was very co-operative. If anything went wrong, he'd call.

RG: So there weren't people queuing up outside the next day, desperate to play *Pong*?

AA: Actually, that was the first inkling something was weird. Bill told us that a certain set of customers turn up at nine in the morning: alcoholics drinking right after breakfast. All of a sudden, Bill said people started showing up that didn't even drink beer, just to play *Pong*. Turns out they were from another company and proceeded to make a copy of the game – Ramtron, I think they were called. It was an honest clone in that they built it themselves from our design. The other sleazy companies just copied our board to build



"People started showing up at Andy Capp's Tavern that didn't even drink beer, just to play Pong"

SELECTED TIMELINE

- **Pong** 1972
- **Space Race** 1973
- **Gotcha** 1973
- **Gran Trak** 1974
- **Home Pong** 1975
- **Atari VCS** 1977
- **Atari Cosmos (unreleased)** 1980
- **Odyssey Slot Machine** 1995
- **Zowie Playsets** 2000

machines; they didn't even know how it worked.

RG: And did the coin box ever get so full the machine stopped working?

AA: About a week or ten days later, I did get a call from Bill saying that the machine wasn't working. It didn't surprise me. That prototype was so poorly made, if you'd banged on it, it would've stopped working. I went down to fix it after work and some people were there waiting and were quite upset. It had gained a following, which surprised me. I opened the coin box to get a free game and saw the problem – it was packed with quarters.

RG: How much money do you think was in there?

AA: About $100. That was a surprise, too. 400 games of *Pong* in a week. I told Nolan and he said, "That's interesting…"

RG: Is that the moment you realised that videogames were the future?

AA: God, no! We were just a small engineering company. There were five of us: Nolan, me, a secretary named Cynthia, Ted and his brother. The plan was to do contract work for companies like Bally, but Nolan had crazy ideas. He told me *Pong* was actually a design for a home game for General Electrics, which was a lie. It was bullshit but was supposed to inspire me to work hard and make this simple, primitive game, which he didn't think was going to be any good. He was going to throw it away!

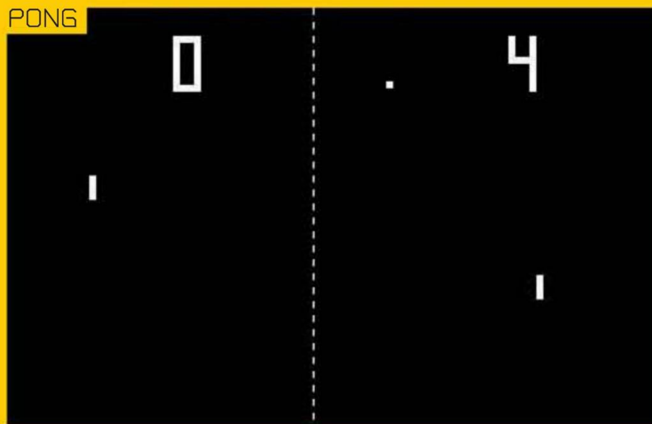
RG: Did it bother you when you realised Nolan had lied to you?

AA: Oh no. You have to know Nolan! I'm an engineer and this was an interesting challenge. Then Nolan wanted to make 100 a day right off the bat! We had no money, no manufacturing, there were only five of us… my wife remembers me coming home and saying, 'he's f***ing crazy!' But we grew so fast it was kind of unworldly. I was 24 years old and I'd been at Berkeley in the Sixties. This whole capitalism thing, I didn't really take it seriously. By the time I realised it was a lie, we were all too busy making these machines. I might have been pissed if it had been a flop, but we had a tiger by the tail.

RG: You were born and raised in San Francisco. Did you wear flowers in your hair?

* FIVE TO PLAY

PONG



IT MIGHT NOT have been the first coin-op machine, but this is where the industry really began. Pong didn't so much epitomise Bushnell's mantra that games should be 'easy to learn, difficult to master', it prompted the realisation in the first place and thus introduced gaming to the masses. The graphics might be as minimal as they come, but you'll still be surprised how gripping an extended rally can be, becoming almost a battle of wills as much as dexterity. The simple gameplay was given some subtlety too, as Al split the bat into eight segments, with three vertical speeds, plus two straight shots in the middle, allowing some last-second wrist work to send your return of serve spinning out of reach of your opponent. And of course there was that lovely hollow ringing sound when ball struck bat, as evocative of childhood as the school bell or ice cream jingle.

ATARI VCS



AGAIN, THIS WASN'T the first home games console nor was it the first to use cartridges, but it was the one that brought electronic entertainment into the front rooms of millions of homes. The original vision for the VCS was simply to play *Pong*, Tank and a driving game, but it ended up being the dominant console platform for the next decade. Al: "One of the best things I ever did was have on the team Jay Miner, the most brilliant silicon architect of the time, Ron Milner, who'd worked on the prototype and Larry Wagner, a software guy, because I wanted us to be writing games while we were making the chip so I could change the hardware to make the software better."

HOME PONG



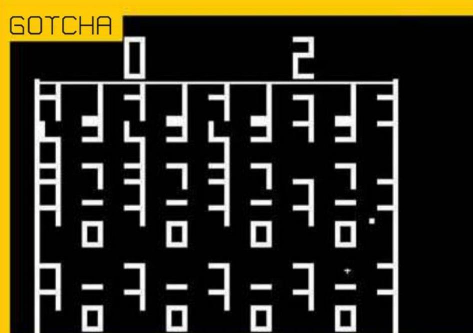
ON THIS SIDE of the pond, it was probably unlikely you played *Pong* on Atari's home console, but without the technical wizardry of Al and his team which put the game on a single chip, you wouldn't have spent the Seventies playing on your Grandstand, Prinztronic or any one of the multitude of copycat systems, arguing with your mum about how this was better than watching *Opportunity Knocks* 'as a family.' The home version was first marketed under Sears' Tele-Games label, before the success led Atari to manufacture its own model, a rather stylish and sturdily built offering with its logo prominently displayed on the front.

GRAN TRAK 10



DRIVING GAMES HAD been a staple of arcades in the electro-mechanical days and this very early digital version established several features, such as checkpoints and inconveniently placed oil slicks, which would become mainstays of the genre. This first iteration only had you as a single driver racing against the clock, but *Gran Trak 20* added a second player, and *Indy 800*, released through Kee Games, increased the grid count to eight and brought colour to videogames for the first time. The top-down racer was to be further developed through the *Sprint* series and perusing download services for modern consoles suggests there is still mileage in the genre.

GOTCHA



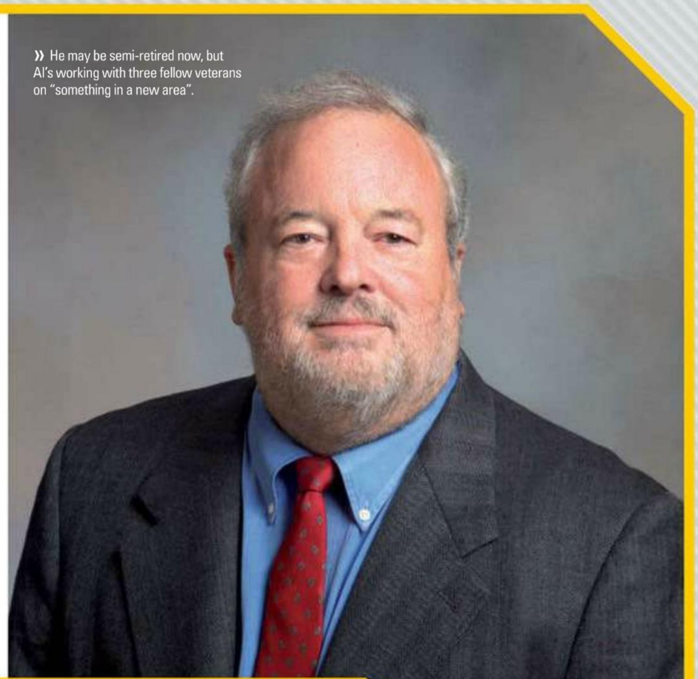
A REAL ODDITY, and not just because it remains the only game to model its control panel on lady bumps. The pink, breast-like mouldings encased two joysticks, used to control a square in hot pursuit of a cross. One player would be the hunter, while a second would try to elude capture as they traversed an ever-changing maze. Though it offers little entertainment value today, it is arguably the first example of a maze game, if you don't count *Hunt The Wumpus*. To say it's a direct ancestor of *Pac-Man* may be pushing it, but the theme of pursuer and pursued dashing through a labyrinth means the two titles nicely bookend the first decade of arcade games.

AA: Throughout my high school years, I lived right near the corner of Haight Ashbury.
RG: Wasn't that the centre of Flower Power?
AA: I've been at the centre of all types of shit! I've had a very interesting life.
RG: They say if you remember the Sixties you weren't really there…
AA: I remember Ken Kesey and the Kool Aid acid test, though I was too young to go to one. Thank God. I was involved with People's Park, which was like a student hippie commune, and I was there when they dropped tear gas on it from helicopters, which was kind of funny. There was rioting and shootings…
RG: So did you turn on, tune in and drop out like a proper hippie?
AA: I actually started out as a football jock. That's what helped me get into the University of California at Berkeley. I played football for Cal for one week. It was either be a football player or an electrical engineer and I chose the latter.

RG: Was that a tough choice?

AA: Oh, I was always a nerd. I fixed televisions from the age of 12. I worked my way through college fixing TVs for repair shops. I always wanted to be an electrical engineer… whatever that was.

RG: So did you end up playing Space War in the computer labs all night?
AA: No… we had mainframes at Cal but you couldn't touch them! Nolan had graduated from Utah, which in the Sixties was one of only places to have a PDP-1. He saw Space War on that machine and he had also worked at an amusement park in Utah in the summer. He started to connect the dots… how can we translate a game on a million-dollar computer to the arcade?
RG: You actually met Nolan Bushnell at Ampex. How did you end up working there?
AA: I landed this great job in my third year at Cal: six months at Ampex and six months in school. The plan was to make enough money to pay my way through college. Did I? No, I pissed it away on beer and women. I still had the TV repair job though, so it was fine.
RG: What were your first impressions of Nolan?
AA: He was an engaging, talkative guy. He didn't impress me as a great engineer but he was an entrepreneur. I mean, in the late Sixties, he set up a club to buy and sell stock at a time when you had to be a rich man and know somebody to buy stock. He started to work on this game *Computer Space* in the evenings and he left Ampex to join Nutting Associates. We thought he'd made a terrible mistake. If you got a job at Ampex, you worked there for life. You got your gold watch! To throw that away and go and do something called videogames… the president of Ampex, Charlie Steinberg, even called Nolan in and told him he was making a big mistake.
RG: So when Nolan and Ted Dabney asked you to leave Ampex and join them at Syzygy, surely you were making the same big mistake?



» He may be semi-retired now, but Al's working with three fellow veterans on "something in a new area".

> "My attitude was: I don't want to do something if it's been done before. Where's the fun in that?"

AA: I was young and thought, 'Gee, this is crazy,' but I thought if I join a little company, I'll have to learn about the entire process, not just engineering – buying, manufacturing, hiring and all that stuff. I figured it would fail in a year or two and then I'd come back to Ampex. What the hell? This was the Sixties, we had the Cold War… live life!
RG: When you began at Syzygy, we've read that Nolan first suggested doing a driving game…
AA: I think that was made up. *Computer Space* was reasonably successful but not a big splash. Nolan thought the winning game might be something more complex, maybe like a driving game. But once *Pong* took off, he realised maybe the games don't have to be more complex, they need to be simple and pleasing. That's where the sweet spot is!



RG: So how did Nolan actually describe the game that became *Pong* to you? Did he give you a detailed design document?
AA: Oh no, it was just a very general goal: let's create a ping pong game on a TV screen where you're looking down on it. One spot that moves, two paddles… just to get that on the screen with the limited technology we had was pretty exciting for me.
RG: It's been well documented that Nolan Bushnell visited the Magnavox Profit Caravan in May 1972 and saw Ralph Baer's tennis game playing. Were you aware that that was what he was basing his description on?
AA: What people don't realise is, you know that movie *The Producers* by Mel Brooks? This was just like that! He picked a game that he thought was a dog but was very simple. He was going to throw it away! Copying someone else's game isn't a problem if you're never going to sell it, right? Well guess what? It became a f***ing hit, just like in the movie!
RG: So *Pong* was like Springtime For Hitler? Did Magnavox see the funny side?
AA: We got this letter from them pointing out patents and we're like, 'What? That's bullshit!' But in the end we got a paid-up licence… everyone else had to pay royalties.
RG: In retrospect, *Pong* seems an incredibly simple game, but when you were creating it, did you actually agonise over the size of bat, the speed of ball, the angle of the bounce and the like?
AA: [laughs] Nolan had just said a ping pong game, that's all. In the first version I got working, the ball only went at one speed and that wasn't much fun. So I talked to Nolan and Ted and built a circuit that made the ball speed up and, hey, this is more fun! It evolved. As for ball size and stuff, everything was based on expediency – whatever worked!

Remember, I was trying to make something simple and Nolan had told me it was for a home game so keeping costs down was primary. Like, the paddle didn't go to the top of the screen, which was a design flaw, but I soon realised that was critically important because a good player could always win eventually by getting it over the top of the other guy's bat. If I hadn't put that in accidentally, the game would've been a failure because people could have played it forever.

My motto was: if you can't fix something, call it a feature!

RG: You sound like Bill Gates…

AA: I taught him everything he knows!

RG: Atari ended up releasing a string of *Pong* sequels – *Pong Doubles, Quadrapong, Puppy Pong, Spike* (which was essentially *Pong* on its side)… the modern games industry gets a lot of criticism for flooding the market with endless sequels, but didn't you start all that?

AA: [laughs] Yes we did, but we tried not to! It was what the customers wanted. The second game I designed, *Space Race*, didn't do very well and the third, *Gotcha*, which was really a precursor to *Pac-Man* – those were done before *Pong Doubles*. Doing a four-player *Pong* was technically uninteresting to me so I hired someone else to do that work. I get bored easily!

RG: You even put *Pong* in a barrel didn't you?

AA: Yeah. They were actually old wine barrels. And smelt like it.

RG: Were there any other weird places you contemplated putting that *Pong* board in?

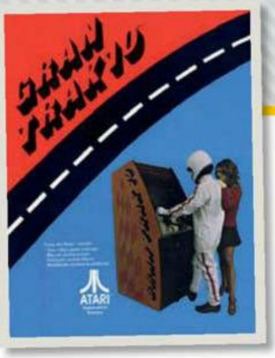
AA: Nolan was full of them! Jesus Christ! You've seen *Breakout*, right? That was just another variation on *Pong*. Nolan convinced Steve Jobs and Steve Wozniak to do that behind my back because I didn't want to do it.

RG: As well as all the versions of *Pong* produced by Atari, there were a slew of copycat games from other companies. How annoying was that to you?

AA: Very! My recollection, which is different to Nolan's, is we only shipped 3,000 *Pong* machines, but there were 10 or 20,000 made. That was money we should've earned. But we had something that the copiers didn't: the next game.

RG: One of the results of all this new competition was Ted Dabney sold his share of the company to Nolan and left. How did that make you feel?

AA: Oh boy. Atari was in a period of rapid growth, it was out of control, and we all had to adapt and do new things. We had all been engineers at Ampex and had been very protected in our little boxes and suddenly we had to get into manufacturing, materials, shipping… it just wasn't Ted's thing. Ted was a dear friend and it broke my heart that it didn't work out.



RG: Earlier you mentioned *Gotcha*, your third game for Atari. Was getting a maze up on screen a challenge?

AA: *Gotcha* was inspired by a defective Pong circuit board. You had 70 or so chips and typically you would have one or two bad ones every time you built a board. The score circuit on one screwed up and there were these segments all over the screen. We were like, 'Hey look at that, we could use that!'

RG: And what exactly inspired the controller setup on that game, which closely resembles part of the female anatomy?

AA: The boobs were the idea of George Fracco, a guy we hired to make our machines look more interesting. We only made about ten with controllers that looked like breasts. Real collectors' items.

RG: Didn't Nolan ask you to produce a 20-player version of Gotcha by linking up multiple cabinets?

AA: He was gushing with ideas. It was hard as an engineer to keep up! That was planned but never built.

RG: Despite the early success with *Pong* and its various offshoots, by 1974 Atari seemed to have been in a real mess, with huge debts and staff layoffs. How did that come about?

AA: It was kind of complex. We had started our own competition with Kee Games and that was well run by Joe Keenan. We gave him our designs and Steve Bristow, one of our best engineering guys, and they did a pretty good job.

We'd bitch to the distributors about Kee, 'Those bastards stole our designs; they stole our engineers', and they loved it! They would run right down the road and talk to Kee Games about us! That was why it was so much fun working with Nolan. We would even play games with our own customers.

> "We turned up at the June '77 CES with the VCS and it blew everyone away"

RG: Creating a supposed rival in Kee Games so you could get around exclusivity deals with distributors was a clever idea. Why, then, did Atari end up on the brink of ruin?

AA: Nolan had read this book about growing companies and the thesis was that the people you use to start a company are not the same people you use to grow the company when it gets over a million dollars. We'd made over a million in the first year so he set about hiring people to replace me and the VPs of finance, marketing and manufacturing. He hired people with no experience of coin-op or innovation. Like, he hired a Christian psychiatrist as the president. Very strange. Long story short: it was a disaster. They ruined everything and Atari almost tanked.

RG: So Nolan actually replaced you? You must have been livid.

AA: Well, at the same time my mother was dying of cancer, so it meant I could be with her for the three months when all this was happening. She passed away and shortly afterwards I got a call from Ron Gordon, our marketing guy, saying, "Get back here, goddammit!"

RG: What did you find on your return?

AA: The banks had stopped loaning us money, our suppliers were cutting us off… Nolan broke down in tears, which I'd never seen before. We went out to a restaurant together and Ron got busy bringing the right people back and merging us with Kee Games. Joe became president of Atari and I was back as VP of engineering.



*NUMBER CRUNCHING

Al was employee number **3** at Atari

The number of points required to win a game of arcade *Pong* is **11**. In the home version it's **15**

The number of simultaneous players in *Gran Trak* ***10*** is **1**. The number of simultaneous players in *Gran Trak* ***20*** is **2**. See what it did there?

The launch price of Atari's home *Pong*, marketed through Sears' Tele-Games label, was **$98.95**, a number Al says that Nolan Bushnell 'pulled out his ass'

Upwards of **26** million VCS consoles were sold during its long lifespan

The number of games built in to Alcorn's Cosmos handheld console was **8**

$39 million: Atari's revenue in **1975**

$1.1 billion: Atari's revenue in **1983**

$539 million: the losses posted by Atari in the same year

RG: And did you find any games ready to ship?

AA: *Gran Trak* was ready to go but it had been engineered by my predecessor who'd done such a terrible job it simply wouldn't work on location. My first job back at Atari was to redesign the game so it could be built. And it was a hit!

RG: The success of *Gran Trak* and then *Tank*, which Lyle Rains and Steve Bristow had worked on at Kee Games, put your coin-op division back on track. Was this when you decided to try to move into the consumer market?

AA: I have a memo from Nolan dated August 1973 listing a bunch of stuff I had to do. Item six is home *Pong*. Basically, the consumer videogame industry is number six on the list! And it interested me. Back then no one made custom chips. I thought, 'I wonder how far I can take this?'

RG: You got together with Bob Brown and Harold Lee…

AA: What a tag team they were. We three designed this chip, AMI manufactured it and when it came back, the damn thing worked! We had no business plan or any idea how many we were going to build. I really hadn't thought the thing was going to work. It was like when a dog chases a car: what does he do when he catches it? We looked at each other and said, 'Holy shit, what do we do now?' Back then no one in Silicon Valley did consumer products. We called Sears and Roebuck and they were incredibly helpful, especially Tom Quinn. It never would've got done without him.

RG: So things went smoothly from then on?

AA: Oh God, no. There were so many hurdles to getting home *Pong* done. Like, we were demoing it to the executive board in Sears Tower on one of their colour TVs. I had this wire-wrap prototype, two big planes with about 200 ICs on them, in a wooden box. It didn't work and then I realised I was using Channel 3 and they broadcast the signal for Channel 3 from the top of the building I was in! I had to open this thing up and retune it in front of all these vice presidents, but we got it to work.



» A flyer produced for the unreleased Cosmos holographic console, the great granddaddy of the 3DS.

RG: You seem to have been making it up as you went along…

AA: Oh, we had no idea what we were doing. Like with pricing, Nolan just pulled a number out his ass and it worked. Sears were incredibly supportive and wanted us to just sell it to them but we thought, 'No let's take it to the Toy Fair in New York City'. We didn't realise that the buyers had already done all the deals before the show, so we sat in a booth with this f***ing *Pong* machine, which we thought was going to be the hit of the decade, and none of the buyers from all the big retailers showed any interest at all. That business is very staid, very conservative and very stupid.



» *Space Race* was released the year after *Pong* but failed to replicate its success.

RG: Thanks to Sears' faith in you, home *Pong* was the must-have toy of 1975 and Atari made $39m in sales that year. Was it all fast cars and loose women? You can tell us.

AA: I deny the allegation and I defy the alligators! We had a lot of fun and we made a lot of great products. Other people had more fun with the ladies than me. We didn't take ourselves too seriously and I think we changed the way people in the Valley behaved. We didn't wear suits and ties, which was unheard of at that time. I mean, Steve Jobs worked for me and he didn't wear shoes. He didn't bathe much either…

RG: Talking of bathing, did you spend much time in the infamous Atari hot tub?

AA: We knew our assets were our engineers and we wanted to treat them well because if we lost them, they were hard to replace. We had a work-out room, but people were afraid to use it because, back then, you didn't sit in a hot tub in the middle of the working day. So one day, Nolan and some of us went over there, took off our clothes and jumped in. We were drinking wine and partying and others joined us, including some ladies. I remember a young employee who'd just started there was giving his parents a tour and he pointed to the hot tub and said, "There's the chairman of the board, there's the VP of engineering…"

RG: It's an interesting management strategy…

AA: Our attitude was, look we all have stock in the company, here are our goals, let's work very hard

to achieve them but I managed by objective. I didn't say you had to be there at 8am. If you never showed up and still got the job done, great! Tell me how you did it, I'd like to pull that off too! We'd work all day and night when we had to, but we made time for parties and special events.

RG: At what point did you begin work on the VCS?

AA: At first we just thought 'My God, we've got a whole game on a single chip and isn't that cool?' But then each new game needed a custom chip and it became obvious to us, and other companies at the time, that cartridges with a ROM chip in would be the way to go. We started research on that in late 1975/early 1976, and Steve Mayer and Ron Milner did a spectacular job. Their Grass Valley group took it from idea to prototype in three months and then I put a team together here in the Valley and it took about six months to make a chip.

RG: As part of the deal Atari had with Magnavox over licensing *Pong*, weren't you supposed to share this sort of thing with it?

AA: Nolan had signed a deal with Magnavox a week before the CES in June 1976 that said we had to share any technology we had with them for the next 365 days. That meant we had to keep the VCS a secret and that was one of the hardest things we ever did. We could not keep secrets! That was one of the only times we managed it and it worked to our advantage because we turned up to the June '77 show with this product that blew everyone away. No one saw it coming. I mean, others like Fairchild had cartridge-based games, but this was by far and away the best. We took all the engineers along to share in that moment.

RG: This was around the time that Warner bought Atari. How did that affect things from your perspective?

AA: At first it was great – we had loads of money and could fly round in jets! The VCS did well the first year and okay the next but wasn't meeting targets. Nolan's and my solution was to design new products but Warner was a marketing house and they said, 'No we're going to advertise this.' And they were right. They marketed the snot out of it and it took off. But that wasn't interesting to me. Making lots of money is fun but it doesn't make you go to work every day. The consumer division had become kind of boring to me. Nolan had gone and the Warner guys that replaced him had no idea what to do and the process the management had put in to figure it out was [not very good]. I wanted a new challenge so went off to try to create a game using holography.

RG: Ah, you're talking about the Cosmos. How did you dream that up?

> “We'd work all day and night when we had to, but we still made time to party”

AA: You know I said we couldn't keep secrets? Well, instead we put out disinformation so our enemies couldn't tell which was real and which was bullshit. One of the big bullshit things we put out there was that we were going to use holography in a videogame. It seemed kind of weird and space age enough so that it might happen and it distracted them. Once Nolan was gone I thought, 'Hey I wonder if I really could make a game out of holography?'

RG: So you believed your own bullshit?

AA: Yeah, exactly! It was a challenge. My attitude was: I don't want to do something if it's been done before. Where's the fun in that? I put together a neat team hidden away in engineering away from the corporate nonsense.

RG: Tell us about the Cosmos.

AA: Management had said, if you could make a videogame system with cartridges half the price of VCS ones, that would be great. They only have one chip, so I thought how can you cut cost? The answer: no chip! We put a very cheap, embossed hologram in there instead.

RG: Ingenious. Were the games any good?

AA: Well, not really, but it might have been interesting. The quality was like those little handheld baseball games you got back then, but played over these holographic images. We had an array of LEDs, about 8x9, controlled by a cheap microprocessor, and you had some buttons on the front panel. You put the cart in which had a 4x5-inch hologram and buttons on the cartridge that would tell the motherboard what game to play. All the games were stored in the ROM of the machine itself, not the cartridge. One of two light bulbs inside the base unit would light up in just the right spot to make this 3D image appear. So you'd be playing a space race game over a moon surface and if you crashed another image would appear with this wrecked spaceship.



» Atari had sold 100 or so machines already, but this was its very first advert for Pong, placed in Playmeter magazine in early 1973.

RG: Sounds fascinating. Why did it never go into production?

AA: We took the prototype and *Space Boost* to CES in January 1980 and got orders for 250,000. I think it was that many; I may have been drunk. Warner wouldn't market it, though. The huge success of the VCS, which was making like a billion dollars a year, meant we could put a product out and if it failed it didn't matter financially… but, emotionally, they were so afraid to put something out that might fail and the bad publicity, they wouldn't release anything new. It's endemic to big companies. The success of their products stifles anything new.

RG: So that's why you left Atari?

AA: I walked away from millions of dollars. If I'd stayed there and shut up and looked pretty I would've made millions in bonuses but I couldn't stand it. That's a problem I have.

RG: But you didn't leave the games industry behind just yet, did you?

AA: I went off with Nolan and founded a company called Cumma. The problem in those days was there were billions of cartridges and a retailer didn't know what to put on the shelves, what will sell, and if he bought a bunch of games that didn't sell he was stuck with them. Nolan and I had this clever idea to make cartridges with static RAM so you could download a game onto them and when you were tired of it, you could put a new game on it. Way ahead of its time. We had a special unit that could make carts for the VCS, the Colecovision and any of the other machines out at the time. We got the thing introduced in 1983 and the market blew up – you couldn't give away a videogame. That party was over…

RG: Since the videogames crash in the mid-Eighties, you've worked at Apple, helping to invent the mpeg format and QuickTime, you've produced interactive toys at Zowie, created a media-rich slot machine for Las Vegas at Silicon Gaming and worked with lots of start-up companies. You seem to like things at the beginning, when they're still small.

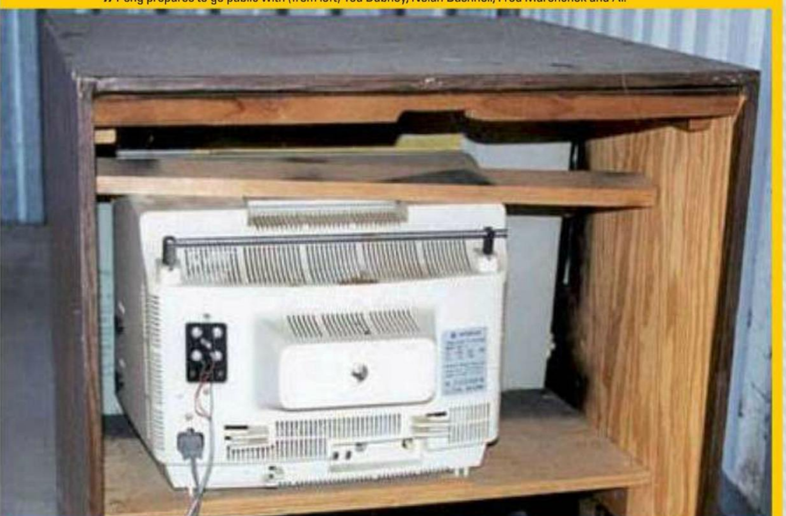
AA: I like puppies but I don't like dogs! [laughs] In the Valley, you can choose to work with big or small companies and I work better in a small environment. Plus, I like new challenges. I'm semi-retired now but I'm still working with three other old-timers on something in a new area for me and I just got back from a conference at Stanford on hot chips. I'm trying to keep current!

RG: Given you were right there at the start of the videogames industry and created the games that got Atari off the ground, do you ever feel your contribution is overlooked? Nolan does tend to get all the attention…

AA: Not at all. Nolan deserves all the credit. More than he already gets, in fact. You know I said I used to come home and tell my wife he's f***ing crazy, he wants to build a hundred machines a day? I never would have done any of it without him. Sure, I was the engineer, but frankly there were others that could have done the job – maybe better, maybe worse. I was crazy enough to go along with the gag. I was at the right place at the right time, at Berkeley and at Ampex, to have these things happen. And I got my rewards. Nolan and I are great friends and I get plenty of respect from people like yourself asking me questions. Most engineers work their whole life on stuff and are anonymous. I'm lucky enough to have done something that touched so many lives.



» Pong prepares to go public with (from left) Ted Dabney, Nolan Bushnell, Fred Marenchek and Al.



» The original *Pong* prototype. The name was simply half of ping pong, *not* connected to the sound of ball striking bat.



YOU ASK THE QUESTIONS

We were inundated with questions for Allan Alcorn. He managed to answer a good selection of them…

Did you work on any abandoned projects?

Apart from Cosmos, let me think… ah yes, Video Music! [laughs] Harold Lee, who was kind of a hippie, Hell's Angel type who rode Harleys and Bob Brown, who was the straightest guy who ever worked at Atari, had this idea to build a product that connected your TV set to your stereo. You'd put the set on and see this dazzling light show. We kept Harold away from the Sears guy, Tom Quinn, who wore a suit and was a real businessman. Atari was hard enough for them to take without showing them the crazies in the backroom, but once home *Pong* had been a success, we were a bit more relaxed and Harold and Bob thought they had a great idea. So we got this set up in the lab with a big TV, stereo blasting out Iron Butterfly and this light show going on.

Tom looks stunned and says, "This looks like the kind of thing hippies would sit around and smoke pot". Harold goes, "EXACTLY!" and pulls a joint out his pocket and offers it Tom. That kind of ended the discussion. We released the product at the Consumer Electronics Show in January 1977 and we didn't sell any! Ask any engineer from back then and they'll have a Video Music, boxed, in their closet.

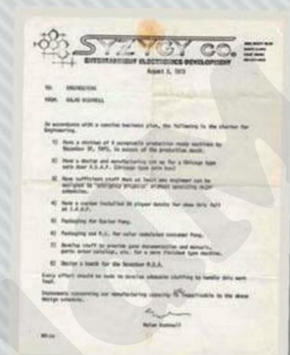
Did you ever play someone at *Pong* who didn't know who you were?

I was just at California Extreme and this ten-year-old was playing an original machine by himself. So I went over and said, I'll play it with you. I beat him, beat him real good and I said, 'You know, I used to be the best *Pong* player in the whole world.' He looked at me like I was crazy. He didn't know I designed it and was the only player for a while.

Did you create the paddle controller for *Pong*?



Yeah it was just a simple potentiometer. I bought a cheap one for the prototype and after we'd had the problem with the coin box filling up, the next thing that went was the potentiometer, within a few weeks. I thought this was crazy, then I did the math; for every quarter the machine took, you turn that knob 20 or 30 times. Multiply that out, this thing was getting tens of thousands of turns per week. I wound up having to buy a very expensive premier potentiometer from a military contractor so it would last.


SYZYGY CO.

» The original August 1973 memo from Nolan Bushnell to Al, including the request for a 20-player Gotcha set-up and a home Pong console

What do you think of Nintendo's new hardware?

I like all the stuff Nintendo have been doing, with the Wii and the motion controllers and the 3DS. Yeah, it did make me think of the Cosmos and I smiled! It's great to see that creativity and risk taking. I've just learned about the new chipset for the Microsoft games machines. You know what it does? Exactly the same as the previous one but cheaper. Not one f***ing new idea. Come on guys…

Thanks to Marty Goldberg for his help with this article

Bank Panic

EXPOSING THE BENEFITS OF ONLINE BANKING SINCE 1984

RETROREVIVAL



» ARCADE
» SANRITSU DENKI/SEGA
» 1984

I first discovered *Bank Panic* on my Amstrad, where it was released by Dinamic with the far less catchy name of *West Bank* (and a bloody great conversion it was too), but later I learned that the arcades was where this addictive little shooting game first originated.

Assuming the role of a Sheriff, you must protect a bank from outlaws while being careful not to shoot customers depositing bags of cash – though why these people would ever want to store their savings inside a Mecca for robbers is anyone's guess. It would be far less hassle and safer to simply store their hard-earned cash beneath a couple of large rocks.

Anyway, with the graphics and its first-person perspective giving it the look of a gun game, the first thing that'll likely strike you about *Bank Panic* is the fact that no lightgun is found on its cabinet. Instead, you get six fire buttons (three for each player) and a joystick. This is because the game isn't actually a shooting game per se, it's actually a brilliantly conceived game of fast reactions and good timing.

How *Bank Panic* works is pretty simple: the depository has 12 entrances (no wonder it has a security issues) with three crosshairs always poised on three of the 12 doorways. When one opens either a robber or a civilian will appear, and you must shoot the robbers while avoiding the civvies. To complete a stage you must move between each of the 12 doors helping ensure money is deposited safely into the bank through each one.

But the gameplay isn't quite as simple as that, as you are only permitted to shoot a robber once they've drawn their pistol first, and the game throws in the odd bomb (you have to snuff out the fuse on the door) and the occasional red herring to catch you off-guard, such as civilians bound with rope that must be shot free, bow-legged kids balancing Stetsons on their head and coy outlaws that hide behind bank patrons.

If you've never played *Bank Panic*, I would urge you to check it out – if you like your titles requiring little in the way of brainwork then this addictive arcade game is definitely for you.



Don't Copy That Floppy

Back in simpler times, games were easy to copy. And so copy them we did. The early games industry was hampered by piracy so rampant it would have made Captain Jack Sparrow's eyeliner run. Profit margins were slashed, developers went under – traditional lawmakers seemed helpless in the face of this marauding horde of buccaneers. But a few brave souls fought back. Tim Clare tells their story…

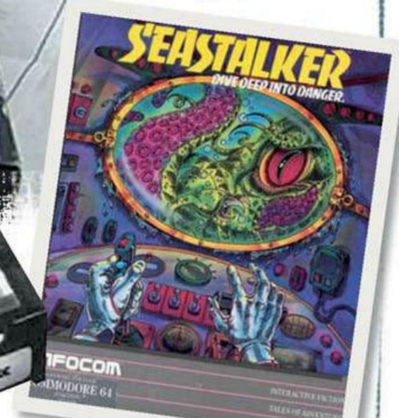
At the start of the century, many commentators warned that MP3s and illegal downloads spelt the end for the music industry – and, for a while, it looked like they might be right. Why, after all, would punters fork out for something they could so easily get for nothing? Most people, after all, see piracy as a victimless crime. The advert says, 'You wouldn't steal a car,' which is true, but it's not a very accurate analogy. Pirating a DVD or album is more like having the ability to almost instantly make a free duplicate of your mate's car, while keeping the original intact – and if we could do that, then, actually, we probably would. We all would, right?

In the Eighties and early Nineties, games developers faced a similar problem. Copying games onto cassette, floppy disk and, later, CD, was quick, cheap, easy and, for most people, guilt-free. Friends copied games from friends. Dirt cheap compilations appeared on stalls at car boot sales. Many people owned more pirated games than genuine titles. Companies warned that, unless something was done to halt the rising tide of illegal duplication of software, the future of the games industry was in dire jeopardy.

Something had to be done. Basic protection measures prevented casual users from easily making usable duplicates, but as pirates found ways to get round technical impediments to copying tapes and







» Lenslok looked futuristic but proved to be a fiddly pig in a poke.



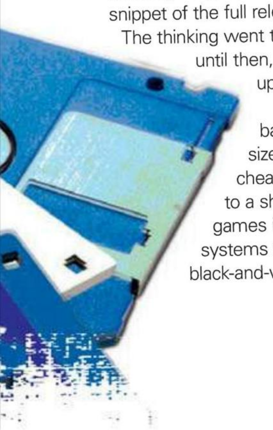
floppies, developers needed to become ever more devious with their countermeasures.

Before the days of aggressive DRM and online verification, copy protection was a low-tech, ramshackle thing. Most gamers can remember one of the earliest, most basic, and most popular forms of copy protection, where a game would instruct the player to go to a certain page, paragraph and line in the manual, and to type in the relevant word. After a number of unsuccessful tries – usually three – the game would either reset or lock the player out, thus foiling any scurrilous pirates who had copied the game but did not own a copy of the manual.

Usually, gamers would be asked this question right at the beginning, but sometimes – particularly in text adventures – it would happen after the player had progressed a certain distance into the game. In Magnetic Scrolls' tongue-in-cheek kleptomaniac adventure *Guild Of Thieves*, for example, the game would wait until you had made 100 entries into the text interface before prompting you to refer to a specific word in the manual, "to make sure you're not a thief". Fail to correctly input the word three times, and the game would lock up.

Finicky East vs West DOS-based space simulation *Buzz Aldrin's Race Into Space* only presented the player with a copy protection prompt when launching specific space missions. Players would be required to input the total time spent in space by veteran astronauts, information which was included in the manual. If you got it wrong, your poor would-be spacemen would be blown up in a horrible shuttle launch accident.

By hiding copy protection a little way into games rather than having it confront the player on loading, some companies hoped to have their cake and eat it. Pirates would unwittingly copy and distribute what, in effect, ended up being demo versions of the game, allowing naughty thieving punters to sample a small snippet of the full release before it locked them out. The thinking went that if players had enjoyed it up until then, chances are they would stump up for a bona fide copy.



But the problem was that text-based manuals, even relatively sizeable ones, could be easily and cheaply photocopied, several pages to a sheet of A4. In response, many games introduced colour-based code systems that could not be reproduced as black-and-white photocopies. These, too, however, were not without problems. *Manic Miner* sequel *Jet Set Willy* came packaged with a notoriously complex and fiddly chart consisting of 180 tiny coloured blocks arranged in a grid. On loading, the game would present you with a grid reference and ask you what colour the relevant block was. Given that each was less than a millimetre in width, this system saw much gnashing of teeth and flinging of cassette cases as four minutes of precious loading time went down the swanny.

UNDER LOK AND KEY

One of the most inventive – and loathed – early copy protection systems was Lenslok. Created by inventor John Frost, it was a small device made of plastic, with a transparent lens. Shipped flat with games, it had a hinged flap either side that needed to be folded back to create a frame. The lens had a series of ridges that bent light to decode images on the screen, turning them into letters. The lens then needed to be pressed up against the TV when prompted, in order to read a code. It was bundled with games like *Elite*, *Moon Cresta* and software like OCP Art Studio, appearing on systems such as the ZX Spectrum, Commodore 64, Amstrad CPC and the 8-bit Atari, among others. "Lenslok is extremely easy to use," claimed the accompanying literature cheerfully, words that rang with bitter irony in the ears of furious gamers.

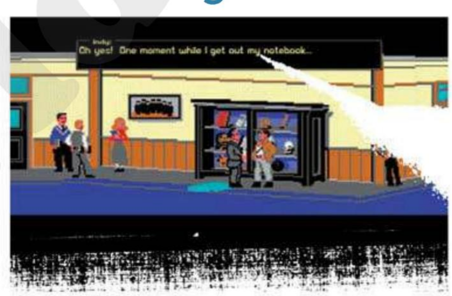
In theory, using Lenslok was straightforward, if a little arduous. When the copy protection screen appeared – sometimes on loading, sometimes, as in games like *Jewels Of Darkness* on the C64, after a set number of turns – first up, a large capital 'H' would appear. Using the keys specified, the player had to adjust the letter until it was the same width as the unfolded lens holder. Next, you had to fold the two wings of the lens holder to form a U shape, making sure that the bit that said 'This Side Out' was on the outside. Next, you had to hold the lens at arm's length, with the feet of the lens holder braced firmly against the television screen, and, with one eye closed, line up the central line marked on it with the line displayed on screen. Are you getting all this? Good.

Next, you had to lower your head slightly, making sure it was at least a foot away from the lens, until

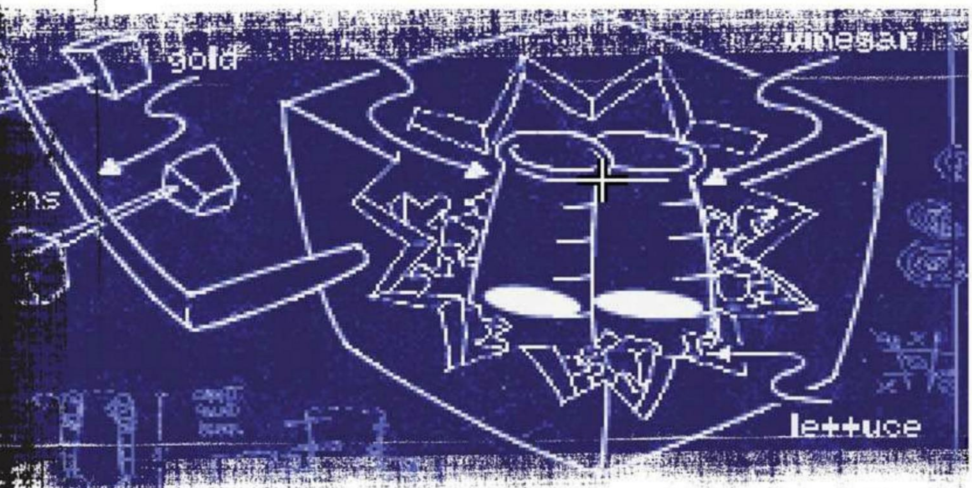


» Appropriately, Douglas Adams' *Bureaucracy* came with a lot of paperwork.

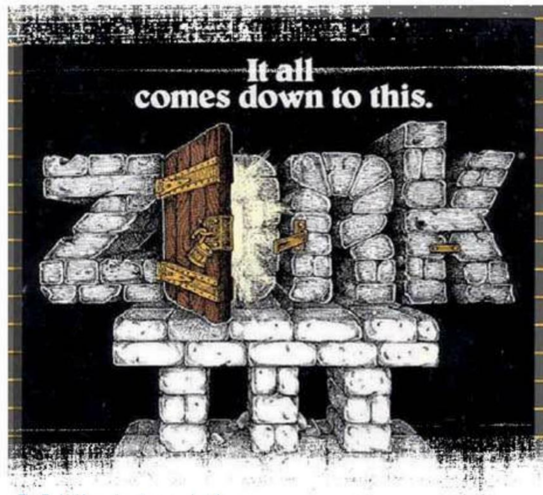
> "Before DRM, copy protection was a low-tech, ramshackle thing"



Don't Copy That Floppy



» [DOS] Dr Fred's super battery needs a few tweaks…



» The Zorkmid remains strong against the yen.

Feelie Good

SOME OF THE best 'feelies' came with the Infocom games by Douglas Adams. *Bureaucracy* is an adventure that sees what should be a simple change of address spiral out into a Kafka-esque nightmare of form-filling and rising blood pressure. It came packaged with things like a flier promoting the magazine *Popular Paranoia*, entitled: 'Are You A Paranoia Person?'

Teasers on the form include: 'What left-leaning organisation foiled the coup d'etat directly after the assassination of John F Kennedy, leading to decades of crypto-communist government in America?', 'How are the dentists of America conspiring to destroy the minds of our children?' and 'How do *they* learn so much about you?'

Bureaucracy also came with several application forms, and a copy of a 'You're Ready To Move!' pamphlet. As well as containing scads of vintage Adams humour, these extras also had vital snippets of information that you would need if you were to progress through the game and not die of a stress-induced aneurysm. Infocom also reasoned that owning such cool accessories would encourage gamers to fork out for the real thing.

the letters 'OK' became visible. Finally, making sure you kept the lens holder braced in exactly the same place, you had to reach down and press the space bar. If all was well, a two-letter code would appear where the message had been. Input these two letters, and phew, at last, you were done.



Never mind that it required legitimate owners to do a ridiculous amount of monkeying around just to use a game that they'd paid for. Never mind that games wouldn't only reset your computer for failing to put the right code in, but often also for taking too long to input the code. Never mind that many users found Lenslok so complicated and fiddly that they struggled to play their own games. Worse than all those problems, was that, in many cases, Lenslok simply didn't work.

Particularly large or small televisions rendered the lens holder useless, as the 'H' displayed on screen during calibration could not be shrunk down small enough or expanded wide enough to allow the code letters to be displayed properly. Most egregiously, when the Spectrum version of *Elite* was released, the wrong version of the Lenslok device was shipped with approximately 500 copies of the game, meaning that it was completely incapable of decoding the letters on screen.

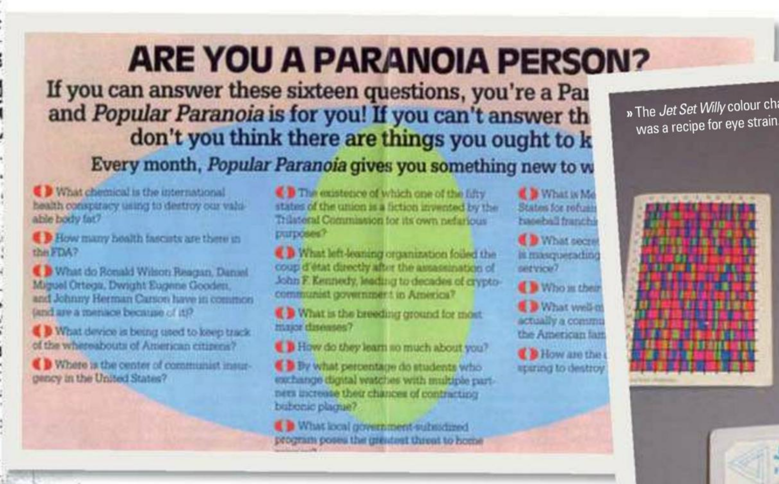
Although it was initially received eagerly by companies desperate for a way to stem the rising tide of game piracy, Lenslok ultimately proved to be unwieldy and unreliable. What had appeared to be an elegant, high-tech solution ended up doing more harm than good – you know, like ED-209 in *RoboCop*.

KEEPING IT REAL

Another problem with security measures like Lenslok or demanding the player rifle through a boring manual to find a specific word is that they didn't do much to create an atmosphere. If you're a game designer, you want to build an immersive fictional universe that gamers can lose themselves in. Stopping the action to say, 'Hello, please take time out of your fun experience to provide a code from the manual so we know you didn't buy this off that dodgy guy down the market,' rather spoils the ambience. As a result, many games made at least a token effort to make their security measures vaguely in keeping with their imagined world.

Inherit The Earth: The Quest For The Orb was a 1994 point-and-click adventure game from The Dreamers Guild. In it, you control Rif, an anthropomorphic fox who lives on a version of Earth with medieval-level technology, from which it seems that all the humans have mysteriously vanished. His journey takes him to the book-filled catacombs of the rats, keepers of ancient knowledge. They remember the humans, since they were the first to be experimented on and granted the power of speech.

After conning his way into the catacombs by distracting the gatekeeper and donning a rat's cowl, Rif gets stopped at various points through the maze. There, a rat will mistake him for a fellow archivist and ask him a quick



ARE YOU A PARANOIA PERSON?

If you can answer these sixteen questions, you're a Par
and *Popular Paranoia* is for you! If you can't answer th
don't you think there are things you ought to k

Every month, *Popular Paranoia* gives you something new to w

What chemical is the international health conspiracy using to destroy our valuable body fat?

How many health fascists are there in the FDA?

What do Ronald Wilson Reagan, Daniel Miguel Ortega, Dwight Eugene Gooden, and Johnny Herman Carson have in common (and are a menace because of it)?

What device is being used to keep track of the whereabouts of American citizens?

Where is the center of communist insurgency in the United States?

The existence of which one of the fifty states of the union is a fiction invented by the Trilateral Commission for its own nefarious purposes?

What left-leaning organization foiled the coup d'état directly after the assassination of John F. Kennedy, leading to decades of crypto-communist government in America?

What is the breeding ground for most major diseases?

How do they learn so much about you?

By what percentage do students who exchange digital watches with multiple partners increase their chances of contracting bubonic plague?

What local government-subsidized program poses the greatest threat to home

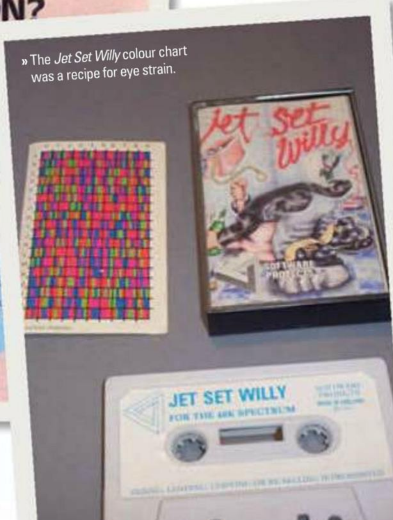
What is Me States for refus baseball franch

What secre is masquerading service?

Who is their

What well- actually a commu the American fam

How are the spiring to destroy



» The *Jet Set Willy* colour chart was a recipe for eye strain.

trivia question on the history of their world's tribes. The player must look up the relevant passage in the manual and type in the correct response. Three wrong answers, and the game resets itself, returning to DOS with the stark message: 'YOU ARE DEVOURED BY HUNDREDS OF SCREAMING RATS!' Charming.

LucasArts was particularly adept at this sort of game-related copy protection. The VGA version of *Indiana Jones And The Last Crusade* came bundled with a replica Grail diary, complete with back story, newspaper clippings, telegrams, coffee-stained pages and jottings from archaeological research. At the start of the game, Indy is asked by colleague Walter Donovan to help him translate a stone tablet. The player has three chances to enter the correct code based on the 'translation table' included with the game, which can only be viewed through a transparent red layer. If you fail to input the right code, Dr Jones presents Walter with a cack-handed mistranslation, and finds himself swiftly ejected from the building.

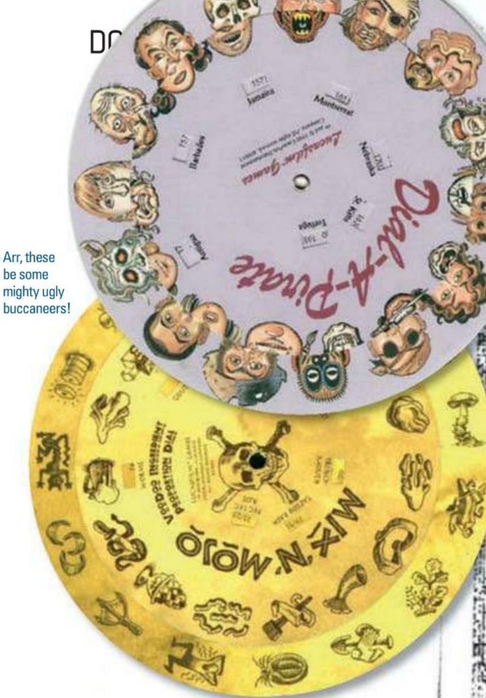
Music-themed point-and-click *Loom* was packaged with a 30-minute audio book detailing the game's back story, and an illustrated notebook, the 'Book Of Patterns'. The book was supposedly an artefact from the in-game world, a tome given to all apprentice members of the weavers' guild. As well as fleshing out the spells – or 'drafts', as they are referred to in the game – that the hero Bobbin Threadbare can use, the book also contained a series of musical notes. When the game starts, the player is presented with a guild's crest and the name of a 'secret weave', which must be looked up and the correct note matched to the symbol to begin the game proper.

Some versions of *Maniac Mansion* needed codes and telephone numbers to be read from the manual, and the copy protection to its sequel, *Day Of The Tentacle*, is also hidden further into the game. After mistakenly releasing the megalomaniacal Purple Tentacle then accidentally sending his friends Hoagie and Laverne into the past and future respectively, the hero Bernard must help Dr Fred rebuild the time-travelling toilets that sent them there. But when you bring Dr Fred the blueprint for his Super Salad Battery, he realises that he has made some errors in calculation. As a card-carrying super-nerd, Bernard offers to help him complete the design. At this point you must cross-reference the patent number in the top-right corner of the plans with the various versions of the Super Battery printed inside the game's manual. By adding or removing croutons from the gold-plated fork and adding extra olive oil to the two jars at its centre, you must make the battery in the blueprint look like the corresponding one in the manual. Get it right, and the game continues. Get it wrong, and Dr Fred shakes his head and tells you to try again… in an endless loop, until you get it right.

In that scenario, it might sound like you could just keep guessing until you stumble on the correct design, but with four croutons that can either be left on or removed, and five possible oil positions for two different jars, there are a possible total of 400 different Super Battery designs. Frankly, anyone bloody-minded enough to spend an entire day systematically going through every possible version deserves to get the game for nothing.

"Many games tried to make their security in keeping with their imagined world"

Zak McKracken And The Alien Mindbenders came complete with a 'passport' full of 'exit codes' for various countries. The player does not need to use them for most of the first part of the game, which sees Zak chasing down a two-headed squirrel for a tabloid story and waking a bus driver with a kazoo. However, as soon as you want to leave the USA for more far-flung destinations, you need to match four rather abstruse symbols to the appropriate grid reference on the chart. Fail to input the correct code five times, and instead of a trip to exotic Lima, Zak winds up in 'Pirate Jail'. Unlike the other jails in the



» Arr, these be some mighty ugly buccaneers!

Pirated Pirates

PROBABLY THE MOST famous piece of copy protection paraphernalia is *Monkey Island*'s much-loved 'Dial-A-Pirate' code wheel. The wheel was decorated with a motley succession of buccaneers, their faces all split laterally by the inner wheel. Twisting the wheel left or right created a mix-and-match effect, constructing bizarre new faces by recombining the old ones.

After loading, the game would confront you with a message that read: 'WAIT! Before we begin… let's have a quick history quiz.' You would then be shown a picture constructed from two halves of different pirates' faces, and asked a question like 'When was this pirate hung in Antigua?' or 'When was this pirate hung in Jamaica?' By rotating the wheel to create the relevant pirate, then looking through the appropriate slot in the inner wheel, you would get the answer.

Monkey Island 2 continued the theme with what it called 'Lame-O Copy Protection'. The opening screen presented you with a random voodoo recipe – for example: 'Recipe for Peg-Leg Rot: Mix _ duck feet with _ squirts of peg leg polish. Mix well.' By turning the code wheel to the recipe as specified, small slots would reveal the correct quantities of ingredients to input.



» [DOS] Some of the answers may be worth a wild guess.



Don't Copy That Floppy



Q&A With Gary Bracey

The former development manager at Ocean Software was at the helm at the height of the pirate invasion. We got in touch to find out what life was like on the swashbuckling front lines



■ Just how badly did piracy affect the industry during your time at Ocean?
In hindsight I think the issue was made out to be a lot more damaging than it actually was. Don't get me wrong – piracy was a huge beastie back then, when cassettes and 3.5" floppy disks were easily copied and distributed. However, the key question is how much the industry was actually harmed by this. The answer can only be quantified if you believe that each pirated copy equals a lost sale, and I think that's a ridiculous assumption. I have little doubt that piracy did affect some direct sales, but to counter that, the potential 'marketing' exposure of having so many users playing and talking about the game in question may have actually influenced an upturn in real sales. The problem is that any such theory is speculative. The real issue, I think, is that people in the industry – myself included – got pretty emotional at the thought of folks 'stealing' what a group of people had worked hard on. In reality it's difficult to argue that it actually was 'stealing' per se, although there is a case for copyright theft. In commercial terms, though – and with the benefit of hindsight – I don't believe any real damage was done. At the time it was said by a few people that if piracy continued then there wouldn't be any money coming back into the industry to pay for the development of new product; if that prophecy had been accurate then there wouldn't be a videogames industry now!

■ How effective were the various copy protection methods at fighting back against piracy?
It was a fruitless aim, really. Whenever a new protection was announced then it was just seen by the hackers as throwing down the gauntlet, thus making a huge challenge to be the first one to crack it, which inevitably happened very quickly. It might have helped with protecting some of the casual 'playground' copying, but overall the protection had little effect, I think.

■ Did some of the negative aspects of copy protection ever outweigh the benefits?
Again, with the benefit of hindsight it might have done. Certain protection techniques made loading of the game a little more sensitive and therefore if your machine was a little below-par then you might have struggled to achieve a successful load. This may have resulted in returns… which is a bigger problem than piracy!

■ Did anything good come out of all that piracy?
Yeah, there was a good trilogy of movies starring Johnny Depp! Actually, I know a few ex-hackers who found very gainful employment in the gaming business. Anyone who put their talents to more legitimate endeavours in the industry probably made fairly significant contributions to coding, etc. I think also that we eventually learned that education and awareness is far more effective than physical anti-piracy measures such as copy protection. The bottom line is that most regular punters didn't even know that piracy was wrong, and so an effective campaign to enlighten would have been a much more beneficial solution.



> "Some aimed to actively frustrate pirates and waste their time"

game, there is no means of escape, and a large Jolly Roger flag adorns the wall. By way of punishment, Zak and the player are treated to a lecture on the evils of piracy by the jail's warden.

One of the most celebrated innovations in the realm of 'in-world' copy protection was Infocom's 'feelies'. Infocom text adventures came packaged with miscellaneous pieces of extra physical content. Many games contained brilliantly designed collectables, such as the 'zorkmid' that came with *Zork* – an actual minted coin representing the currency of the realm. But in addition, feelies had clues for completing the games, some containing essential information.

For example, *Zork III* included financial projections and a press release from the 'Frobozz Magic Spell Company'. It reveals four new magic spells released by the company, including 'DRILBO', which "strips a floor of yellow wax"; 'BORCH', which "puts insects to sleep"; and 'QUELBO', which "transmutes coconuts into gold". Hmm… those spells sound oddly specific. We wonder if they'll come in handy?

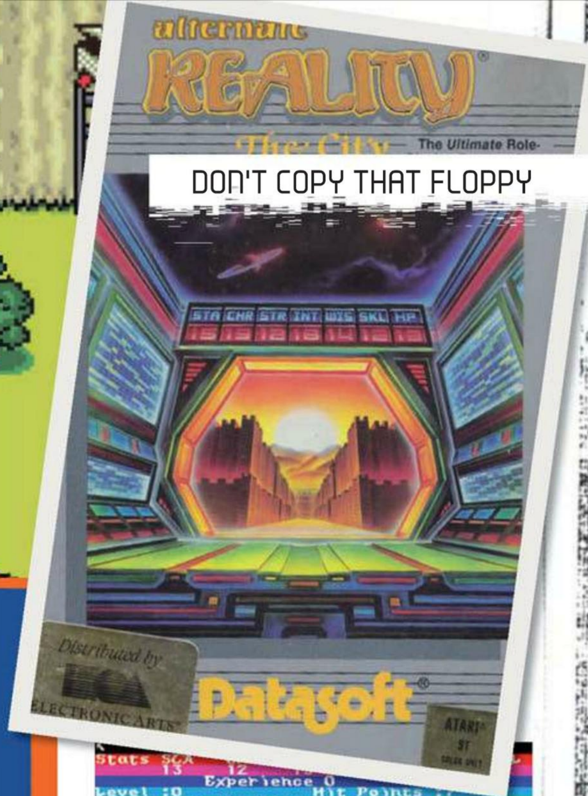
WHEELY GOOD

Code wheels proved a cheap and popular way of testing whether a player had bought the game, without forcing them to leaf through a dog-eared manual or squint at a series of tiny grid references. They were also pretty cool. Each wheel had gaps through which text showed. The player would have to line up the wheel as directed by on-screen prompts then input the code or words revealed.

A form of code wheel was bundled with EA's text adventure thriller *Amnesia*, where it served as a 'street map' to guide you through Manhattan. Interplay's *Neuromancer*, an adaptation of William Gibson's seminal cyberpunk novel of the same name, similarly employed a code wheel that was integrated into the plot. In the game, you must use the code wheel to

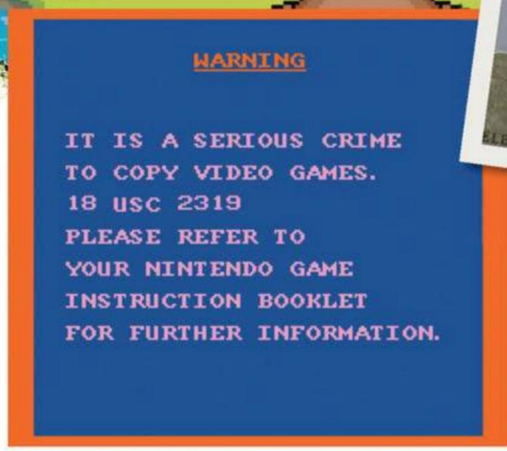






DON'T COPY THAT FLOPPY





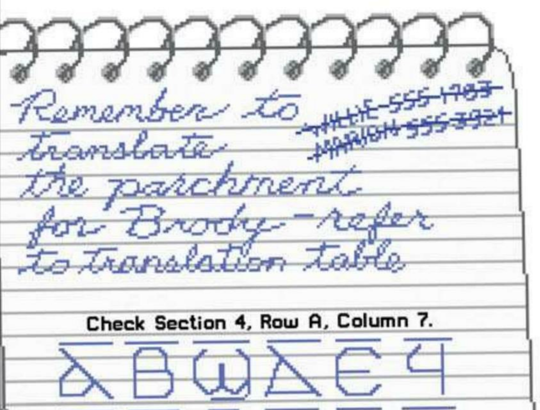
» [SNES] *EarthBound* has some of the most fiendish copy protection of all time.



More Than A Feelie

INFOCOM'S CELEBRATED 'FEELIES' perfectly combined their dual function as serving as a security check while enhancing the realism and immersive nature of the games they came with. In Cold War thriller *Border Zone*, for example, the player has a timetable marked 'Trains From Frzi To Vienna Daily!' The right-hand side is dotted with peculiar symbols that the player will need if they are going to progress.

But, as their name suggests, feelies were often more than straight text. *Seastalker*, a deep ocean exploration game, came with a decoder slide that looked worryingly like the Lenslok frame, but fortunately without its horrendous design flaws. *Leather Goddesses Of Phobos* went one better, including a scratch-and-sniff card with seven number panels. The player was to scratch them when directed, adding one of the only examples of in-game 'smell-o-vision'.



» Who knew Dr Jones had such terrible handwriting?

access PAX terminals at various points in the game and jack into cyberspace. Without it, you cannot progress any further.

Code wheels made for appealing extras, and had an advantage over manuals in that they were very hard to copy. The only way was to dismantle them, or to photocopy the wheel in every possible configuration – a fairly arduous task with some three-ply wheels.

ROTTEN EASTER EGGS

Most forms of copy protection were simple gatehouses meant to keep thieves from playing games that they hadn't paid for. A few notable examples took it one stage further, however. Instead of mere preventative measures, these games had copy protection that aimed to actively frustrate pirates and waste their time. They were the gun-toting Charles Bronsons of the gaming world, finally pushed too far by the endless back-and-forth of defeated countermeasures and cracked security. These games were out for revenge.

Alternate Reality: The City, is a proto-first-person 3D adventure game with a *Matrix*-style storyline, which was released for the Commodore 64, Atari ST and Amiga, among others. The game seemed to allow copies to be made, but when a copied version was played, the player character would quickly begin to weaken from a disease that no healer in the game could cure. This would continue until the character died, without explanation or any clue that it was a result of the game having been pirated.

The sequel, *Alternate Reality: The Dungeon*, was less subtle in punishing thieving players. If you tried to play a copied edition of the game, two super-tough FBI agents would confront you right as you started the game and kill you in battle.

Perhaps the most celebrated example of fiendish yet undeniably poetic hidden copy protection appears in the SNES version of *EarthBound* (*Mother 2* in Japan). The game is an off-the-wall, furiously original RPG starring a psychic, baseball bat-wielding little boy called Ness. Its anti-piracy measures are similarly quirky and inventive.

On startup, if the cartridge detects irregularities indicating that it may be copied, you get a screen with a message that warns: 'It is a serious crime to copy video games.' After that, though, the game then appears to continue as normal. However, all is not as it seems, as throughout the game there are far more bad guys roaming the levels than usual, meaning Ness gets tied down in many, many more random battles. The number of extra enemies makes the game frustratingly hard, but that's not all.

If players can grind their way through the oppressively difficult alternate mode and reach the end of the game, they must confront Gygas, the final boss, who is fighting alongside Ness's spoilt kid neighbour, Pokey. Just as the battle enters its final phase, the game locks up, forcing the player to reset. On restarting the console, the player discovers that all saves have been wiped from the battery backup, with no explanation, no way to recover the hours of lost progress, and no indication that it is caused by the game's copy protection.

Given that you're looking at somewhere in the region of at least 20 hours of frustratingly hard play to get that far, we're guessing that a lot of pirate hair was torn as a result of this sadistic little Easter egg. It's very possible that some gamers grimly soldiered through the game a second time, unaware of what had caused the lock-up, only to have their saves wiped again. 'Ouch' just doesn't quite cover it!

TOTAL ECLIPSE



Following hot on the heels of *Driller* and *Darkside,* in 1988 all eyes were firmly locked on to Incentive's latest first-person 3D game, ***Total Eclipse.*** It used a polygonal graphics engine called Freescape, giving players freedom to explore and interact. Gamers had become familiar with the technique following the success of its predecessors and, from the moment gamers saw an aeroplane outside a pyramid and were tasked with ending a curse placed on civilisation by reaching the shrine at the top of the structure before an eclipse took place, there was an aching desire to explore all of the game's 50 locations.

ECLIPSE

When there is a total eclipse, the moon will be destroyed, wreaking havoc. You have to prevent this by lifting the curse.

ANKH

Ankhs unlock doors blocked by a horizontal bar, but you have to search for replacements – don't waste them.

MONEY

Whenever you collect some treasure, your points go up. Collect as much money as you possibly can.



BEARINGS

A 3D world can be disorientating, which is why you'll have one eye on this compass at all times.



HEART RATE

You don't want your heartbeat to speed up too much – if there are mummies in the room, you better get out fast.



HEIROGLYPHS

These icons show if you are walking or crawling, or whether you are taking tiny steps or mighty strides.



WATER

Without water, your heartbeat increases and you can die, so you need to make sure it's topped up using the troughs.

MEMORABLE MOMENTS



Challenge Of The Gods

Total Eclipse was produced in the days before gamers were held by the hand and, just as importantly, before the internet was the first port of call for when you become stuck. To that end, it was a real gaming challenge, pushing the boundaries of 3D gaming at the time to create a world in which you could semi-believe, and packing it with puzzles, mazes, lots of treasure and time-perfect movements. All the while, you're watching your water levels deplete, your heart race and the time ticking away. The Freescape system really came into its own with this game.



Riddle Of The Sphinx

Total Eclipse doesn't have any characters other than your good self. However, the game oozes character, and that is certainly well illustrated in the Illusion areas – a set of rooms that appear rather bland but will confuse, confound and frustrate you. They draw upon every ounce of your mapping prowess and there's little chance you'll succeed without pen and paper to hand. In this section of the game, you need to move between rooms via openings in the wall, but there is no logical connection between them, and you'll spend ages working out what goes where before you emerge a shivering wreck.



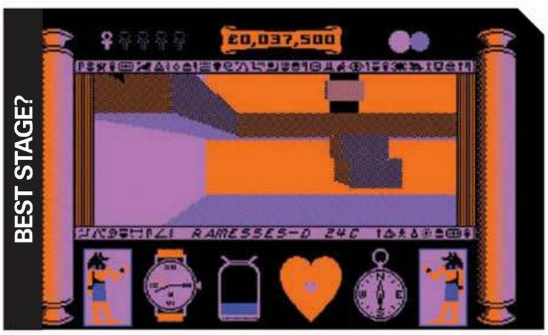
Mummy Fearest

The mummies are not bosses in the strictest of senses – they're rather static, as you can imagine, and yet they are really quite lethal. Your first encounter with a bandaged fiend will be in the Horakhty-G room, where you come to realise two things: the mummies not only shoot but also cause your heart rate to increase, and that it is the latter which will determine whether you make it through alive. By the time you're at Nephthys A and C, you'll be cursing and smashing your keyboard, with heart failure commonplace and shots ringing in your ears. Thank you, gaming gods, for game saves.



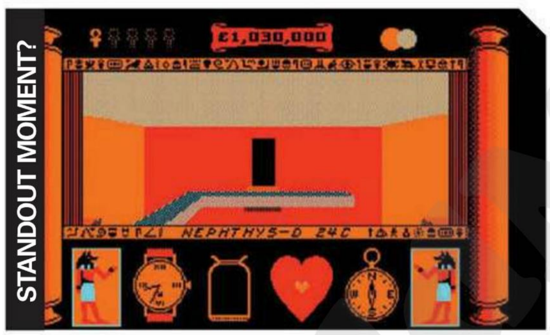
Pyramid Schemes

The best move is that made by the developer in bringing in a raft of elements that make this game a true exploration. Do you have to duck under a blocked doorway or find and use one of many ankhs to open it? Can you shift blocks with brute force or shoot them out of the way? What's the point of a set of stairs with no exit at the top – and what difference would it make if you complete an Eye Match? *Total Eclipse* is a game of discovery and, while movement around the 3D landscape is fiddly by today's standards, it brings a whole new dimension to the gameplay.



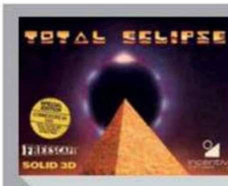
Battering Ramesses

The Ramesses area contains a wealth of puzzles, raised elevations and blocked doors. Getting about was never so difficult. The puzzle contained in the Ramesses-A room requires two visits to solve, and it needs the players to enter from two different doorways. But that's not the bulk of the trouble in this area – it's game over in Ramesses-D if both ground-level doors are blocked. This stage of the game requires a great deal of cunning and thought, and much reference to your map (made all the harder by some illogical connections between rooms). It's a true test of your puzzling skills.



Ankhs For The Memories

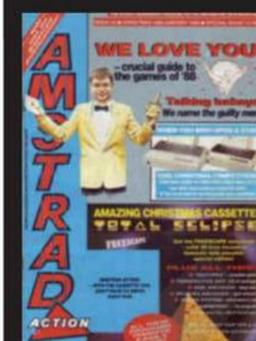
It's difficult to pin down one breathtaking moment. *Total Eclipse* is not a particularly action-filled game and it relies more on brain than brawn (which in some ways makes those heart-stopping moments jar at times). In Nephthys-D, however, there is a moment which requires a bit of forward-planning, and a handy game save as you walk across a narrow, elevated walkway from one door to another, looking down, taking small strides, being careful not to fall off. Sure, it's not a moment you'd brag about to your friends, but it's an illustration of how you need to have your wits about you at all times with *Total Eclipse*.



IN THE KNOW

- **PLATFORM:** PC, ST, AMIGA, C64, SPECTRUM, CPC
- **PUBLISHER:** INCENTIVE SOFTWARE LTD
- **DEVELOPER:** MAJOR DEVELOPMENTS
- **RELEASED:** 1988
- **GENRE:** ACTION-ADVENTURE

What the press said… ages ago



Amstrad Action 93%

Once in a while, we get a game that we just can't wait to get home and play all evening. This time last year it was *Driller*. Six months ago it was *Dark Side*. Now it's *Total Eclipse*.

Crash, 92%

The Freescape technique was impressive in *Driller* and *Dark Side*, but *Total Eclipse* uses it to its full potential.

What we think

Winding through puzzle-filled mazes in a fiendish hunt for treasure, *Total Eclipse* was one of those games you really could get lost in both physically and mentally.

THE LOTUS SERIES

Hello and welcome to Really Great Retro Racing Games! Today, Craig Grannell is joined in the commentary box by Shaun Southern and Andrew Morris, to talk about their hit Lotus series on the Amiga. Now, where's that chequered flag gone?





IN THE KNOW

- » **PUBLISHER:** GREMLIN GRAPHICS
- » **DEVELOPER:** MAGNETIC FIELDS
- » **RELEASED:** 1990-94
- » **PLATFORMS:** AMIGA
- » **GENRE:** RACING

Most racing games quickly tumble into obsolescence. What once dazzled looks tired when technology evolves, leaving shallow gameplay in its wake. Occasionally, though, a racing game is a videogaming milestone, transcending the ages and appealing to gamers today as much as it did when originally released.

For Amiga gamers, the *Lotus* series falls into this category. Developed by Magnetic Fields, a partnership between Shaun Southern and Andrew Morris, the first game represented a fundamental shift in the developers' approach to videogame design.

"It's always exciting designing games for new technology, looking for the best way to exploit new hardware," says Andrew. "It was clear in 1990 that the Amiga was the way forward, and so once 8-bit sales started to dry up, we made the move." After testing the water with top-down racer *Super Cars*, the pair considered their next game. A shoot-'em-up idea went nowhere, so Andrew pushed for another racing title, integrating the split-screen gameplay that had been successful in Shaun's C64 version of *Trailblazer.*

LOTUS ESPRIT TURBO CHALLENGE

Andrew recalls how Shaun rapidly got a road routine working that used mathematical algorithms and raster manipulation, and Porsches were dropped in to race against.

"The game worked on one frame, so it was very fast and smooth," says Shaun. Armed with an early demo, complete with turns, hills and lap-based courses, the pair approached Gremlin, which had published *Super Cars.* Andrew remembers that Gremlin "immediately loved the game", saying that it had acquired the Lotus licence and thought the





» [Amiga] Rivals in *Lotus* were all white due to memory limitations, but this enabled them to stand out from the players' cars.



» [Amiga] The split-screen was left in the single-player game to emphasise *Lotus*'s two-player nature and to ensure that the game ran at 60fps.

> **"It created a feeling of a fast fairground ride, a dimension we'd not seen in any other game"**
>
> ANDREW MORRIS ON THE IMPORTANCE OF TRACK UNDULATION

Magnetic Fields game was a perfect fit – if the Porsches were dropped in favour of Lotuses, obviously.

Ultimately, the *Lotus* road routine was key; everything in the game flowed from it. This aspect of *Lotus* was specifically built around the Amiga's capabilities, enabling Shaun to program a very fast game: "We used the blitter chip to draw everything – this was necessary so we could have hills. Without them, we could have used the Amiga's scrolling to slide the track around and then overlay sprite objects, but our objects were bigger than sprites could handle. Hills meant we had to move the track up and down as well, so we needed a new approach."

Shaun elaborates on roughly how the track and rendering worked: "Each segment of the course had a change left/right amount and a change up/down direction amount – this was the track data. So since the camera followed the course, as you 'projected' down the track and added up the changes in directions, each unit of track had a resultant direction left and right and up and down. For each of those sections, we worked out an offset left/right on screen and an offset up/down from the 'norm', which would be a flat, straight track into the distance. For each of these sections, we interpolated each line that was visible, such that we only had to draw one horizontal line of track for each line. We pre-built this track data for every possible size and used the blitter to put everything on screen as fast as possible."

A "very tight bit of code" worked out the track bit by bit as it sent data to the blitter to draw, and Shaun says by the time they'd worked out the next line, the blitter had finished drawing the previous one, so it was efficient. He adds: "We then created cars and roadside objects as flat sprites at different sizes and used the blitter to put them on screen. Stored clipping information cut off the bottoms of items behind hills."

Andrew says Shaun's approach is what enabled so many cars to be simultaneously on the screen and reckons any alternative would have been too slow: "Many games, particularly arcade conversions, tried to do too much for the hardware to handle. Those games ended up being so slow that they were unplayable."

ARCADE RACING

With the road working and populated, attention switched to gameplay considerations: courses, AI and fine-tuning handling. Throughout, Shaun and Andrew decided that *Lotus* would be an arcade racer: it wouldn't eschew realism, but fun would always take priority. Tracks were rapidly worked up based on lists of numbers that told the road where to go. "There was no physical design," explains Andrew. "The design as such was limited to the number and severity of bends and hills, dictated by what level you were on." He says during the more severe levels the importance of the track undulation became clear: "It created a feeling of a fast fairground ride, an important dimension we'd not seen in any other game."

Lotus wasn't only about speed, though. Borrowing from C64 racer *Pitstop II*, tension was added with limited fuel and enforced pitstops. "The idea was to make you think a bit, and to ensure that the game didn't become monotonous, only being about who can miss the most cars," reflects Shaun. "You had to think about how much fuel you'd need to finish a race, and how fast to drive, because when racing at higher speeds you used more fuel."

Most of your time was spent on the track, though. In single-player mode, you had a pack of computer cars to contend with; in two-player mode, you had the added distraction of battling a friend. Historically, *Lotus* has been accused of having somewhat forceful computer-controlled cars, but Shaun admits that the AI is one of "so many things that were fudged but that no one really noticed". He reveals that the cars just move from left to right at a given speed, even, unrealistically, when going round corners. Each also moves forward at a set speed until reaching the car in front, whereupon they swap speeds. "This has the effect of a car that's been

The Making Of ...
THE LOTUS SERIES



CONVERSION CAPERS

WITH HIS EARLIEST games, Shaun tended to deal with Commodore conversions himself, but *Lotus* spelled the end of that line of thinking. When it came to *Lotus* making the move to other systems, he recalls: "We told the people doing the conversions how things worked, gave them the code and tracks – although I've no idea how faithfully they copied them – and that was that."

Given that the game was so highly tailored to run on the Amiga, Shaun says he was amazed that the game worked at all on other platforms, and especially those that were comparatively underpowered: "It was a tough game to play when it updated at seven or eight frames per second, but I remember people being happy with it."

Andrew concurs: "We didn't have any real input and wondered how anyone would convert the game, but, in fairness, they did a reasonable job. The game ran slowly but looked quite good."

racing away from you suddenly slowing down, bringing you close to it quickly, but it does the opposite for cars behind you that are trying to overtake," says Shaun, admitting that he programmed things this way so that he "wouldn't have to worry about opposing cars trying to overtake each other. No one noticed and it added to the gameplay – lucky, really!" This mechanism also meant that while the rival cars might all frustratingly zoom past when you were refuelling, you'd get the chance to catch them up again. "Once we got that aspect of the game right, the difficulty level was set by a 'base' speed per race – and a lot of testing," adds Shaun.

Collisions and handling were also made simple to keep racing competitive throughout the game. "If crashes damaged you so you were behind and also slower, you'd have no chance, so we never considered that route – *Lotus* was an arcade game, not a simulator," says Shaun. "And because of this, we decided on simple 'twitchy' controls that made you want to play again, because when you failed you thought it was your fault." Andrew adds that the straightforward nature of the handling was also somewhat dictated by the limitations of the road routine: "The thought of including realistic physics in the game was never really an option. Instead, we created a game that relied on fast reactions and easing off the power in corners to keep the car on the road. I think we worked out the car did 0-60 in about two seconds and had a top speed of over 200mph – much faster than the real thing!"

On completion, Shaun recalls playing the game through until he'd beaten it and was awarded the 'Lotus licence', which he says was "a pretty good sign". And shortly thereafter, the press heaped praise on the title: "A brilliant game, and one that demands immediate purchase," enthused *CVG*, while *Amiga Format* called it "the best racing game yet". Shaun puts praise at the time and the game's subsequent longevity down to its "simplicity and addictiveness", saying it was "easy to pick up and play, but hard to master". Andrew agrees: "It didn't try to do too much and had the right balance between speed, playability and graphics. Because of that, it will always be one of the best examples of its type on the Amiga."

LOTUS TURBO CHALLENGE 2

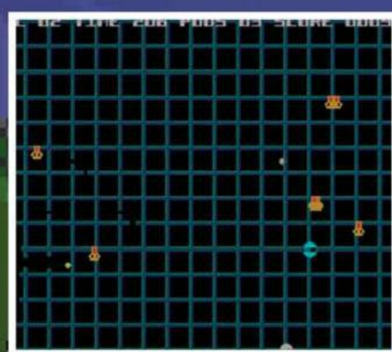
With a confirmed hit on its hands, Gremlin tasked Magnetic Fields with creating a sequel, although the game's direction was immediately very different from its predecessor's. "We didn't want to do a rehash, and so a checkpoint racer seemed the way to go," says Andrew.

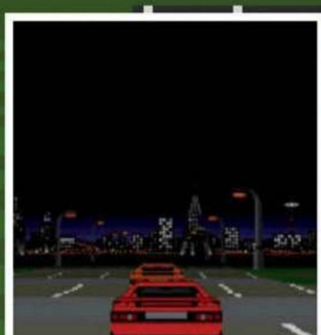
"I like to think we took the braver choice – and it worked," adds Shaun, who considers *Lotus 2* the pair's finest hour.

Drawing on a wide range of influences – Andrew enjoyed *OutRun*; Shaun remembers *Rad Mobile*'s weather and terrain providing ideas – more emphasis was placed on varied environments and the single-player game. "Creating the game was a very different challenge to the original *Lotus*," says Shaun. "We had the road routine but had to add code to handle lots of new objects and vehicles, and we worked hard



» [Amiga] A key factor in *Lotus 2* was its much more varied environments, including some extreme weather conditions.





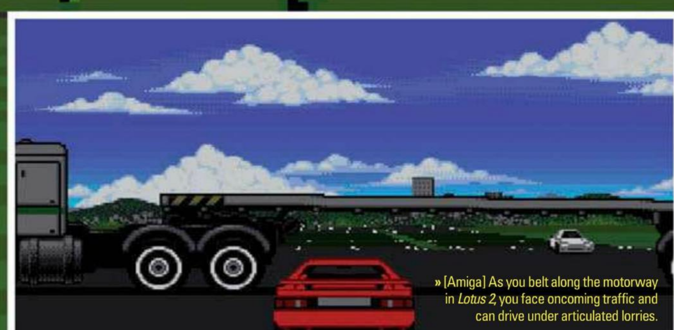
DEVELOPER HIGHLIGHTS



TRAILBLAZER (PICTURED)
SYSTEMS: AMSTRAD, ATARI 8-BIT, ATARI ST, C16 AND PLUS/4, C64, GIZMONDO, MSX, SPECTRUM
YEAR: 1986

KIKSTART II
SYSTEM: AMIGA, AMSTRAD CPC, ATARI 8-BIT, C64, SPECTRUM
YEAR: 1987

SUPERCARS
SYSTEM: AMIGA, AMSTRAD CPC, ATARI ST, COMMODORE 64, NES, ZX SPECTRUM
YEAR: 1990


» [Amiga] As you belt along the motorway in *Lotus 2* you face oncoming traffic and can drive under articulated lorries.

on making each of the levels unique and in getting the stage times right." Andrew notes that on the hardest levels "you often ran out of time and 'rolled' over the finish line, which usually had people cheering".

At every stage during development, decisions were driven by a desire to increase variety. "Technically, the course design happened in a similar way to the original game, but this time we were really pushing the abilities of the Amiga, creating features that hadn't been seen before," says Andrew. He recalls the "look of amazement on people's faces" when they saw levels with fog, although Shaun jokes that he'd "never seen a more dismal scene in an arcade racer than in our storm level". There was also a determination to push the arcade nature of the game, hence, as Andrew says, "adding obstacles to each course that made it surprising and interesting". Instead of avoiding huge lorries, it was decided that the player should drive under them. In the forest level, you'd be launched into the air after hitting logs, which Shaun says was influenced by *Kikstart*. And oncoming cars were added – at the time a rarity in arcade racers, which typically had suspiciously one-way traffic. "That was a feature we really enjoyed creating," says Andrew. "Mind you, with your car belting along at 200mph, we slowed oncoming traffic to 30, otherwise it would have been impossible to avoid!"

The *OutRun*-style checkpoint system also forced other decisions. Pitstops were dropped because they slowed the game down, and while limited fuel was considered, checkpoints were deemed enough to drive players on. The lack of lap-based tracks meant the game could be lonely when you were leading.

"We had the same algorithm to make rival cars catch you up, but, yes, if you were out in front, you weren't going to 'lap' anyone – we kept things realistic in that respect," says Shaun. Andrew adds that "there were other distractions anyway, which you didn't have in *Lotus*", arguing that leading drivers were kept occupied by environmental hazards and the 'edge of the seat' time factor: "Even if there wasn't a car in sight, you were always against the clock." Also, the game's one-player mode went full-screen, which Shaun says happened because the game "had more of a one-player feel about it and we felt we could sacrifice a little speed to get the obvious benefit of a full-screen mode". He adds that the first *Lotus* game established the two-player credentials of the series, so there was no longer a need to emphasise them.



DISTANT COUSINS

Lotus-like games through the ages



Pitstop II (C64, 1984)
The much-loved C64 racer by Epyx is almost a proto-*Lotus* with its split-screen gameplay and pitstop scene.

"Fairly obviously, yes, we were essentially making *Pitstop II* for the Amiga, although, of course, trying to improve on it," admits Shaun. "Although we didn't associate with F1, aside from fake driver names!"



Top Gear (SNES, 1992)
A split-screen racer with remixed *Lotus* music, released by Gremlin Graphics… Hang on a minute!

"Yes, and it caused fuss in the office at the time," grumbles Andrew. "But there was little we could do. Many reviews mentioned the similarity and I think it would be fair to say that it was… uh… 'heavily influenced' by *Lotus*."



Jaguar XJ220 (Amiga, 1992)
Core's pretty racer somewhat pre-empted *Lotus III*, boasting a course designer and varied environments, but it has a tendency to feel a bit empty and is a tad lacking in the 'fun' department. Still, if you like 'smooth' and 'attractive', it might be your bag of sprite-based racer.



Lamborghini: American Challenge (SNES/Amiga, 1993)
Resembling *Lotus*, twice removed – or *Pitstop II*, thrice removed, we suppose – this effort from Titus is effectively *Crazy Cars III* with some natty new threads and optional split-screen gubbins. It was also a wee bit sluggish on a stock Amiga, unlike the original *Lotus*.



THE LOTUS SERIES

> "Our aim was to give it wide appeal, make everyone happy and pull out all the stops"

ANDREW MORRIS ON THE APPROACH TO LOTUS III

» [Amiga] The RECS course designer in *Lotus III* enables you to create new tracks in seconds.



Perhaps ironically, then, the two-player mode suffered a little from changes to core mechanics. While the original game let both players continue if one met the required conditions, *Lotus 2* wasn't so forgiving: if a player didn't reach a checkpoint, their game ended, regardless of how their rival fared. "It didn't seem right to bring both through – this was a game against the clock more than the other player," considers Shaun.

However, something that certainly was forgiving was the game's collisions, which seemed designed to bounce you back to the road, even on colliding with a roadside object at top speed. Shaun scuppers suggestions that this was down to demands from Lotus, arguing that it was all about gameplay: "It was to speed things up. A single crash could put you out of the race, and since it was time, not your position, that could end your game, that was much more critical." Andrew adds: "It stopped the game becoming frustrating. It's more fun to have a fast pace and a tighter time limit than to have to allow for obstacles that actually just annoy."

Like the original *Lotus*, the sequel was a hit. Shaun repeats that he considers it his best game, and despite noting that there were a few 'if it ain't broke, why fix it?' complaints, "there were many more plaudits for doing something new".

LOTUS III: THE ULTIMATE CHALLENGE

The final game in the series, *Lotus III: The Ultimate Challenge*, was started immediately after its predecessor's completion. But it was more evolution than revolution, refining *Lotus 2* and reviving aspects of the first game that people missed. "Our aim was to give it long-lasting appeal, make everyone happy and pull out all the stops, because we were pretty sure there wouldn't be another *Lotus* game," explains Andrew.

Thus, *Lotus III* provided you with both head-to-head racing and arcade-oriented time trials. Some graphics were notably recycled, although the game also included new environments. "The thing is, the game was huge and a lot of work, and we always wanted to include more, hence us reusing graphics in order to not limit the size of the game," says Andrew.

Of the new environments, the *RoadBlasters*-style Futuristic, with trackside lasers and chequerboard road, was the biggest diversion from earlier games. Shaun thinks "the design was a bit odd and borrowed from other games", but Andrew reckons that it was a worthy addition: "The Futuristic level looked great and felt different to anything else in the series. If anything, I'd also say it was more a nod to *Trailblazer* than *RoadBlasters*." He adds that there was also a lot of diversity elsewhere in the game: "The Windy level added a new dynamic and Mountainside looked visually distinct."

However, *Lotus III*'s most important addition was the Racing Environment Construction Set (RECS). "We'd worked with course designers before, and with *Lotus III* likely to be the final game in the series, we thought gamers would be able to complete the game and gain further enjoyment from creating their own tracks," explains Andrew. The pair started out with the concept of a slot-based editor but weren't convinced. "It struck me as a slow, boring way of designing a course that wasn't in the spirit of the *Lotus* series, and I doubted anyone



» [Amiga] It might be a videogame, but there's still no escaping from roadworks in *Lotus III*.



» [Amiga] Foggy weather in *Lotus III*, with rear lights visible into the distance.

would find it interesting enough to use," continues Andrew.

"We'd also never had our own course editor, otherwise we'd have maybe reworked that for the game's editor, but it still would have been a lot of work for anyone to create a track," says Shaun. "That's when Andrew came up with the code-based method."

With *Lotus* courses being lists of numbers, Andrew realised that the game could enable players to 'describe' courses by manipulating variables: "I spoke to Shaun about using sliders to adjust obstacles and corners, and he worked out how to program it. We then added a 'track code' output system." Initially, the pair considered having a traditional editor alongside the radical, quickfire RECS, but those plans were quickly shelved. "What decided it for us was the ease with which you could send a track to someone," says Shaun.

Although plenty of effort went into the game's visuals and track editor, *Lotus III* hit the market to a mixed reaction. *Amiga Power* criticised its lack of speed and smoothness, saying when you put your foot down "it felt more like the engine of a Skoda", and even *Amiga Action*'s positive review said that "*Lotus 2* owners won't find their money's worth". Shaun thinks those reactions were fair: "It was slower [than competing games], even on simpler courses, because our racing engine suddenly had lots of additional code to handle the extra effects, track types and racing modes."

Andrew's not so sure, however: "Whatever reviewers said was often meaningless and based on a few hours' play, so it was tough to take them seriously. For example, one said we'd copied another game's music selector, despite that game ripping off the one from *Lotus*." He suggests the team did the best it could at the time, although in hindsight "[we] should have added something a little more like *Super Cars* – or, later, *Gran Turismo* – where you would earn money in order to progress".

Lotus III was indeed the final game in the series, although it quietly nipped back in 1994 with *Lotus Trilogy* for the Amiga CD32, which neither Shaun nor Andrew remembers a great deal about.

Shaun is unsure why the series ended, but Andrew thinks the pair had "done as much as we could with Amiga racing games", noting that the next Magnetic Fields release, *Kid Chaos*, took two years and dovetailed with the end of the Amiga's commercial life.

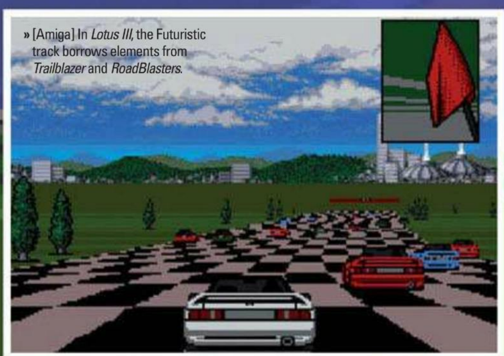
Looking back, the pair remain proud of their *Lotus* racers. "They're some of the best-remembered titles on the Amiga, they put Gremlin on the map, and they established Shaun and I as a design team that knew what it was doing with racing games, leading to us getting the licence to do the *Rally Championship* games," enthuses Andrew, adding that each *Lotus* release had its own merits: "The first was original, the second was exciting and the bestseller, and the third was the most comprehensive – and my favourite." And Shaun, rarely one to revisit his past games, admits that he might make an exception: "I might have to go and find that Amiga emulation disk now… **Retro Gamer**'s made me go all sentimental."



EMULATION NATION

IF YOU'RE SOMEONE who lovingly strokes your iThing and welds classic games to it, you'll be happy to know that an Amiga emulator is winging its way to the App Store. And if you're a fan of *Lotus*, you'll be positively thrilled to know that the *Lotus* games will be available. "It's taking quite a long time, considering I saw a version of it running ages ago, but Manomio's trying to perfect things," says Shaun. "But it looked good and I'm looking forward to it coming out." He thinks the transition to iOS should be more successful than with his C64 games, which were "too fiddly".

Andrew, too, is excited at the prospect of a *Lotus* comeback: "It makes me very happy, because it's great to see classic games getting a new lease of life and being enjoyed by our generation for nostalgic reasons but also by a new generation that appreciates them for their retro appeal and playability."



» [Amiga] In *Lotus III*, the Futuristic track borrows elements from *Trailblazer* and *RoadBlasters*.



» [Amiga] The *Lotus III* options screen sums up how the game effectively combined its two predecessors.

The Secrets

Secret Of Mana is one of the most memorable RPGs on the Super Nintendo, but it wasn't the only game in the Mana series. Retro Gamer reveals the rest



OF MANA

Mystic Quest

For such a highly regarded RPG franchise, the *Mana* series hardly had the most auspicious of beginnings. In fact, it didn't even carry the *Mana* name. First released in Japan as *Seiken Densetsu: Final Fantasy Gaiden* in 1991, the Game Boy title literally translates as *Legend Of The Holy Sword: A Final Fantasy Side Story* and was clearly intended to cash in on the success of Square's flagship Famicom RPG.

Rather than stick with *Final Fantasy*'s traditional turn-based battles, however, *Seiken Densetsu* used an action-RPG combat system that recalled Nintendo's *Legend Of Zelda*, except with RPG systems like experience points, stat-changing equipment and magical spells thrown into the mix. The big twist in the combat came from the power gauge at the bottom of the screen that would gradually fill up whenever the player wasn't attacking. Allow it to fill to the top and you'll be able to perform a MAX attack with special properties including, of course, greater damage. The rewards for allowing the gauge to fill up were great but did include some risk, since you obviously couldn't attack for some time while waiting.



» [Game Boy] *Mystic Quest* doesn't fit with its *Final Fantasy* branding, but it's worth checking out in its own right.



Levelling up in *Seiken Densetsu* was a simple affair, basically asking you to assign points to just four different categories: Power, for damage ratings; Stamina, for defence; Wisdom, for magic points; and Will, which increased the speed with which the power gauge would fill. Though simplistic, there was just enough variety here to ensure that the player could level up their character in a personalised way, defining their statistics in a way that complemented their own combat strategies.

"Secret Of Mana introduced many European gamers to the joys of the JRPG"

Though a fun little action-RPG, *Seiken Densetsu* was far from a huge success. Even now it is rarely afforded much attention, either as the first in a very popular series or in the context of the Game Boy's best RPGs. This may be because it was released at a time when RPGs were still an obscure genre in the West, or may simply be because of the confused heritage of the title. When it was first released in the UK, *Seiken Densetsu* went by the name of *Mystic Quest* and may have been confused with the 1993 SNES release *Mystic Quest Legend*, another *Final Fantasy* spin-off title that was otherwise unrelated to the Game Boy game. And to make matters worse, *Mystic Quest* was re-released in 1998 by Sunsoft as *Final Fantasy Adventure*, presumably to cash in on the success of *Final Fantasy VII*. In reality, however, this only confused even more gamers, who found *Final Fantasy Adventure* to be a primitive action game that had nothing in common with the luxurious PlayStation RPG with which they'd fallen in love the year before.

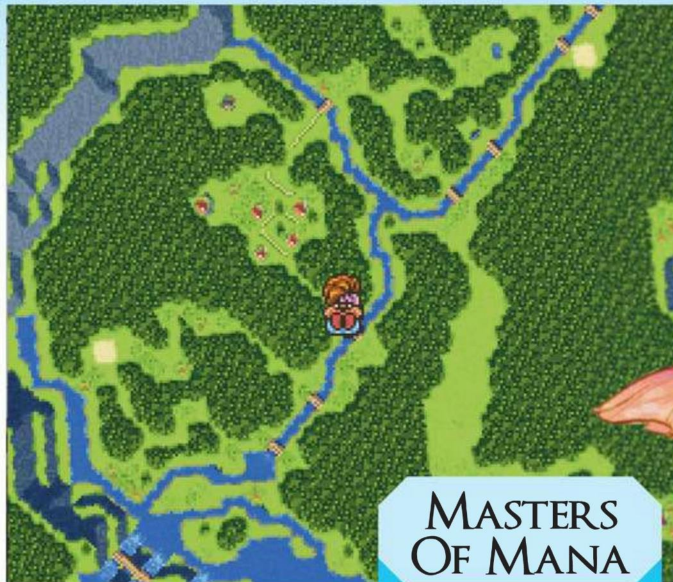


Secret Of Mana

One of the lesser-known facts about *Seiken Densetsu* is that it actually began life as a very different game. Originally intended for the Famicom Disk System, it was supposed to be an epic adventure, called *Seiken Densetsu: The Emergence Of Excalibur*, which would span five separate disks. But management at Square deemed the project too ambitious and expensive, and cancelled development during pre-production. The game was therefore heavily redesigned and resurrected as a Game Boy project a few years later.

This downgrade of ambition is a fate also suffered by the sequel. *Seiken Densetsu 2* was originally designed for the Super Famicom's proposed PlayStation add-on, a CD-ROM drive for the Japanese SNES, which was, infamously, eventually abandoned by Nintendo, prompting Sony to develop the PlayStation into the standalone console that changed the games industry overnight. No one could have predicted the eventual success of the PlayStation, however, so instead of following Sony, Square stayed with Nintendo – for the time being, at least – and shifted *Seiken Densetsu 2* to cartridge format. Consequently, a significant amount of content had to be removed from the game in order to fit it into the much smaller ROM space on the cartridge, and first to go was the plan to have multiple routes through the adventure, culminating in several possible alternate endings.

Despite these changes, *Seiken Densetsu 2*, or *Secret Of Mana* as



» [SNES] Even with its downgraded scope, *Secret Of Mana* stands tall among SNES RPGs.



» The Rabite has been used for loads of *Mana* merchandise. Here's a pair of lovely slippers.

Masters Of Mana

Koichi Ishii

Koichi Ishii is the creator of *Seiken Densetsu* and has worked on every game in the series to date. He first joined Square in 1987 and worked on many of its earliest RPGs, including the first three *Final Fantasy* titles and the original *SaGa*. Ishii designed and oversaw all of the *Mana* games while also contributing to other Square titles like *SaGa Frontier* and *Final Fantasy XI*, before leaving the company in 2007 to set up his own studio called Grezzo, where he developed a Japan-only WiiWare RPG called *Line Attack Heroes*. With Ishii no longer at Square Enix, the future of the *Mana* series is in serious doubt.

Yoshinori Kitase

Another Square veteran, Kitase's contribution to the *Mana* series begins and ends with the scenario writing on *Mystic Quest*. Since then, however, Kitase has gone on to become one of the most important individuals at Square Enix. He's produced and directed a string of hits over the years and quickly rose to the head of the publisher's main development team, where he recently oversaw *Final Fantasy XIII*.



Masters Of Mana

Hiromichi Tanaka

One of the founding members of Square, going all the way back to 1983, Tanaka can still be found in the offices of Square Enix today and was most recently responsible for *Final Fantasy XIV*, but let's not dwell on that. Tanaka programmed Square's first game, *The Death Trap*, then designed the first three *Final Fantasy* games, and later went on to design both *Secret Of Mana* and *Seiken Densetsu 3* before moving on to big PlayStation games like *Chrono Cross* and *Xenogears*.

Nasir Gebelli

The videogame programmer that other videogame programmers worship, Nasir Gebelli made his name on the Apple II before moving to Japan to join Square. Gebelli worked on all of the developer's major Famicom games and was the main programmer on *Secret Of Mana*, his final Square game before leaving to found his own company.



» [SNES] There's a scene in *Secret Of Mana* where you meet Santa Claus. Lord knows why, but it is pretty cool.

it was renamed for the West, still went on to become one of the most accomplished and popular RPGs of the 16-bit generation. Building on the template of the original Game Boy game, it obviously featured greatly enhanced graphics and sound, but it's the evolution of the gameplay that made it a truly excellent sequel. Take the combat, for example: the power gauge remained from the first game, but now it was much more important to the flow of battles. Instead of waiting for the gauge to fill before striking, you now had to hold down the attack button and let go to strike when the power had reached the desired strength. And instead of levelling up the speed of the gauge, you now levelled up your weapons, each level adding an extra bar to the gauge and making the MAX attack extremely powerful but also increasing the amount of time it takes to charge up. You're still free to move your character around while charging, so you can still avoid enemy attacks, although you do move a little slower, and this creates an interesting pace that feels halfway between turn-based and real-time combat.

Secret Of Mana is remembered for a number of its qualities but none more so, perhaps, than its multiplayer functionality. In the original game you would occasionally recruit partner characters who would tag along behind you, but in *Secret Of Mana* you had two permanent party members, constant companions who would help out in combat and could call upon their own special abilities. As the player you could leave these characters to AI control, or you could switch between them to take more direct command over their actions. If you had a multi-tap and a couple of friends, however, you could





all play the game together, the three of you taking control of a character each and working your way through the adventure as a real-life party of warriors. This was a truly unique selling point at the time and remains fairly unusual even today, which is strange because it actually worked incredibly well. There was something deeply enriching about playing through an epic RPG with your friends by your side. It added a tactical element to combat as you vocally shared strategies or called upon each other for help during difficult situations and, in the long term, it felt like a true journey that you shared together. Played in the pre-internet days, it became a shared obsession over a number of weeks as you and your friends would meet up during evenings and weekends to conquer the game, much in the same way that the previous generation of gamers would have banded together to play pen-and-paper RPGs like *Dungeons & Dragons*.

A deep, strategic RPG system, the innovative multiplayer component and the undeniably attractive game world of *Secret Of Mana* all came together to make it one of the greatest RPGs of the era, and it is rightfully remembered today as a stone cold classic, especially in Europe where it was responsible for introducing many console owners to the joys of the JRPG in the absence of

The Secrets Of Mana

Masters Of Mana

Hiroki Kikuta

Originally an anime composer, Hiroki Kikuta was hired by Square when a mutual love of prog rock led *Final Fantasy* composer Nobuo Uematsu to warm to him in an interview. Kikuta's first job at Square was on *Romancing SaGa* and subsequently moved on to scoring duties on both *Secret Of Mana* and *Seiken Densetsu 3*. And a fine job he did too. Kikuta left Square in 1998 to found his own development studio where he designed, produced, wrote and scored PlayStation RPG *Koudelka*, before leaving to become a freelance composer. His most recent work was for Sega on the PSP RPG *Shining Hearts*.

Akitoshi Kawazu

As the list of games made by Akitoshi Kawazu reads like the most difficult, cruelly complex and unfathomably obtuse titles that Square has ever produced, we have to assume that the company keeps him employed as some kind of sick joke. We wouldn't find it amusing to occasionally produce unprofitable games just because they frustrate and confuse anyone unlucky enough to play them, but Square and Kawazu clearly do. Kawazu is best known for the *SaGa* series of RPGs but also produced *Legend Of Mana* and went on to create the *Crystal Chronicles* series, the first of which was a multiplayer GameCube title that forced one of the players to do nothing but carry an orb around. Too cruel, Kawazu.

local releases of any *Final Fantasy* or *Dragon Quest* titles.

Seiken Densetsu 3

With *Secret Of Mana* celebrated for introducing European gamers to the console role-playing game, then its even better sequel can be considered one of the most heartbreaking releases in videogame history, since it was never released outside Japan. One of the most wildly ambitious games of its time, *Seiken Densetsu 3* was so complicated that it would have cost Square a fortune to localise into English, and in 1995, with the 32-bit PlayStation and Saturn firmly established across the world, it's easy to see why the publisher decided not to take the risk on the dwindling SNES market.

All good things come to those who wait, however, and distraught *Secret Of Mana* fans finally got their taste of its sequel in 2000 when the game was unofficially translated by a hacker called Neill Corlett. What those fans found in the translated version was no less than RPG brilliance, way ahead of its time even five years after the fact. Though the number of players was reduced from three to two, *Seiken Densetsu 3* is, by all other measures, a much more ambitious game. Rather than three set characters, it offers a pool of six from which you must select three at the start. Each has their own personal story, and your choice of who to make the main character will influence the direction of the game, including encounters that happen through the adventure and how the story ends. It's an impressive system that adds a personal touch to the flow of the game's plot, as well as creating significant replay value. And much like Square's *Chrono Trigger*, released in the same year, it proves that Japanese RPGs are nowhere near as rigid and stale as some detractors would have you believe.



The innovations don't stop with the story either. *Seiken Densetsu 3* also boasts an unusual calendar system that not only stands as an early example of a day-to-night simulation but also moves through a weekly calendar in which each day offers stat bonuses for certain types of magic, should you use the right kind on the correct day. There's also a rather complex class system that enabled the player to promote their characters to different classes at certain junctures and also offered a branching path that governed whether the characters became good, evil or something in between. Take that, BioWare!

If *Seiken Densetsu 3* had ever been released outside Japan then it would surely be recognised as a classic equally as brilliant as *Secret Of Mana*. Instead it merely became a footnote in the history of the series, albeit one that those unafraid to download, patch and emulate regard as one of the greatest lost treasures of the 16-bit era.



» [SNES] *Seiken Densetsu 3* is full of impressive bosses, including Dolan here.



Legend Of Mana

The years following the release of *Seiken Densetsu 3* saw Square transform into a games industry goliath on the back of the success of 1997's *Final Fantasy VII*, and while this period saw the *Mana* series go quiet for a couple of years, it soon returned as the affluent Square entered its most prolific age, churning out PlayStation games like they were going out of fashion. By the time *Legend Of Mana* was created, however, some of the original development team had moved on to other projects. In stepped new producer Akitoshi Kawazu, a Square veteran known for his punishingly difficult, obtusely designed games like *Final Fantasy II* and the offbeat *SaGa* series. And while the true creator of the



» [PSone] For all the game's flaws, the hand-drawn watercolour art of *Legend Of Mana* can look gorgeous.



Mana series, Koichi Ishii, remained as director, Kawazu's influence on *Legend Of Mana* is unmistakable.

Rather than take the player on a journey through an epic, scripted adventure across a huge, open game world, *Legend Of Mana* went with an altogether different and somewhat bizarre form of progression. Start the game afresh and you're presented with an empty overworld of slots, into which you must plant artefacts in order to grow a randomly generated location containing towns and dungeons. A neat idea in theory, particularly for the way it increased the sense of personalisation and replay value established in *Seiken Densetsu 3*, but this system ultimately disappointed by making the player feel like they were playing through a series of unconnected mini-quests rather than one huge adventure. And while the resolutely 2D visuals were undeniably attractive in the era of pre-rendered backgrounds and blocky polygon characters, their random nature pushed the art direction to a point where the locations naturally lacked a sense of personality or identity, making the world feel a little stale after a while.

Legend Of Mana tried to innovate in other areas, such as the multiplayer. A second player could take control of the AI partners that would occasionally team up with the main character, or they could take the character from their own save data, copy it to a PlayStation memory card, and import it into their friend's game, taking all their stats and equipment with them and retaining any progress they made during their friend's adventure. Another neat idea, this too fell flat because two players controlling the same character, no matter how differently they might have been levelled up, only increased the disconnected feeling between the player and the game's fiction.

Legend Of Mana can be considered a brave attempt by Square to reinvent the *Seiken Densetsu* series in a prolific period of its history but, unfortunately, it did so in a way that detracted from the main strengths of the previous games while also failing to excel in its own right. In retrospect, this is the exact point where the cracks started to show in the series as a whole.

» [GBA] Don't let its development by an outside team fool you: *Sword Of Mana* has undeniable series heritage.



Sword Of Mana

After *Legend Of Mana*, a number of the key *Seiken Densetsu* team left Square to form their own development studio called Brownie Brown. Rather than forge on without them, however, Square simply outsourced development of its next title to Brownie Brown itself. The result was *Sword Of Mana*, a Game Boy Advance remake of the Game Boy original, *Mystic Quest*.

» [Mobile] *Mystic Quest* has actually been remade twice. Here's the mobile phone version, which is different to both the Game Boy and the Game Boy Advance versions.



The high-end 2D graphics of the GBA allowed Brownie Brown to create a visual style in *Sword Of Mana* that was much closer to the look of the other games in the series, particularly *Seiken Densetsu 3*, and the developer also took the opportunity to bring the setting more in line with the *Mana* mythology, removing some of the *Final Fantasy* elements left in from when *Seiken Densetsu* was supposed to be a spin-off title.

Much of *Mystic Quest*'s original gameplay and story remain intact, but there are also a few changes in the remake, most notably the ability to choose to play as and follow the story of the girl character, as well as the boy from the original game. The developer

"Seiken Densetsu 3 is regarded by fans as one of the greatest lost treasures of the 16-bit era"



Secret Of Evermore

When *Seiken Densetsu 3* failed to release outside Japan, American and European SNES owners got *Secret Of Evermore* instead. The only game to ever be developed at Square USA, *Secret Of Evermore* was totally unrelated to *Secret Of Mana* but is constantly compared to it because of the similar title, genre, platform and release date. Nowhere near as bad a game as some people would have you believe, it has become something of a whipping boy among Square fans who blame it for taking the place of *Secret Of Mana 2*. *Secret Of Evermore*'s lead programmer, Brian Fehdrau, told **games™** in March 2009 that the decision not to localise *Seiken Densetsu 3* had nothing to do with the development of *Secret Of Evermore*. "The people on our team never had anything to do with translations," he said. "That was all done by people outside the team, who had been working for the company since before we were hired. In fact, there were several translations done during the development of *Evermore*. The choice not to translate *Seiken Densetsu 3* was made overseas by the parent company in Japan, for undisclosed reasons of their own. I've made speculations as to why but, honestly, I don't have or know any official reason."

Further speculation suggests that *Seiken Densetsu 3* was never released outside Japan because of deeply integrated bugs in the code that would have been too difficult to remove in order to satisfy Nintendo USA's quality control demands. The fact that the game still hasn't been remade or even re-released on the Wii's Virtual Console does lend some credence to this theory.

also tried to bring in some of the multiplayer functionality that the series is known for. Though you couldn't actually play simultaneously, you could link two GBAs together to trade items and even partner characters – a nice touch if you could find someone else who owned the game.

Sword Of Mana is also the only game in the series to claim the accolade of its own special edition console, as Square and Nintendo got together to create the Mana Blue Game Boy Advance SP, which came packaged with a copy of the game and a special carrying case.



Children Of Mana

It was right in the middle of *Sword Of Mana*'s development that the unthinkable happened at Square. 1 April 2003 saw the monolithic publisher officially merge with its longtime rival, *Dragon Quest* creator Enix, to form the biggest developer/publisher in Japan: Square Enix. And while the merger had little effect on the company's business practices, there were a number of trends that, perhaps coincidentally, started to emerge around this time. Encouraged by the success of *Final Fantasy X-2* and inspired by fan demand for a remake of or sequel to *Final Fantasy VII*, Square Enix began its move toward what it called 'polymorphic content'. The idea behind this was that instead of developing a hit and then creating sequels to it, the company would plan several titles, all in the same universe, at the same time in order to strengthen the brand by offering fans a body of work over a relatively concentrated period of time. The first of these works was *Compilation Of Final Fantasy VII*, a series of different genre titles each revolving around Square's most popular work, while other examples include *Ivalice Alliance*, a series of games set in the same world as *Final Fantasy XII* and *Vagrant Story*; and *Fabula Nova Crystallis*, three connected RPGs in the *Final Fantasy XIII* setting. In 2005, Square Enix announced *World Of Mana*, a series of *Seiken Densetsu* games that would be developed back-to-back and explore similar themes but in different videogame genres.

The first game in the *World Of Mana* compilation was *Children Of Mana*, a 2006 Nintendo DS title developed by Nex Entertainment, perhaps best known for its work on modern *Shining* titles *Shining Soul*, *Shining Tears* and *Shining Wind*. Like those games, *Children Of Mana* was a dungeon crawler, heavily inspired by *Diablo* and focused on randomly generated, many-floored dungeons and loot drops. The game also uses the DS's wireless communications to enable four-player co-op, wherein the three helper players retain all experience and loot gained for their own adventures.

> "Heroes Of Mana is without doubt the series' greatest since 1995's Seiken Densetsu 3"

Friends Of Mana

Along with *Seiken Densetsu 3*, this is one of only two *Mana* games not to be released outside Japan. This isn't quite the same loss for fans as the Super Famicom game was, however,



» [PS2] The series' only 3D instalment was disappointing to many.

The World Of Mana

Though the Seiken Densetsu series of games are mostly unconnected in terms of their story and characters, they do all share some common elements. Here are a few of them…



The Mana Sword

A recurring weapon throughout the series, the Mana Sword is often the most powerful weapon in the game and is wielded by the hero. Yes, it's very cliched, but then the series did start off with the working title of *The Emergence Of Excalibur*, and *Seiken Densetsu* literally translates as *Legend Of The Holy Sword*. So we'll let it off.

Rabites

Every game series has its regular, recurring enemy type. *Dragon Quest* has Slimes, *Mario* has Goombas and *Seiken Densetsu* has the Rabite. These yellow, rabbit-like enemies have appeared in every game in the series and have become something of a mascot for Square, which has made sure to slap them on every bit of *Mana* merchandise going. And who wouldn't? Just look at the little fella.





The Mana Tree

Appearing in every single game in the series, the Mana Tree is the source of all the world's magic, and the plot of each game often revolves around trying to save or preserve it. The iconic cover art to *Secret Of Mana* features the Mana Tree in staggering scale against the tiny protagonists, making for one of the most iconic images in RPG history. The less said about the cartoony Mana Tree and its face, as seen from *Legend Of Mana* onwards, the better.

Ring Menu

One of the least talked about but most important parts of the *Mana* series' gameplay is the Ring Menu. It doesn't feature in all of the games, but those that use it are all the better for it. With a press of a button, the action pauses and takes you to an on-screen menu, thereby keeping you aware of the placement of all enemies. Acquire a new item and it will be added to the ring without crowding the other items out. Genius.





Flammie

The Flammie is a sort of dragon that the player uses to get around the world in both Super Famicom games plus *Children Of Mana*. In the 16-bit games, the player summons Flammie by using a monkey drum and then flies around, in real-time, using the console's iconic Mode 7 display.

as *Friends Of Mana* was a multiplayer hack-and-slash game developed for Japanese mobile phones. We're not missing much, though it would be nice if Square remade the game on the iPhone for the completists.

Dawn Of Mana

Titled *Seiken Densetsu 4* in Japan, *Dawn Of Mana* was clearly intended to be the tentpole release in the *World Of Mana* compilation as well as a return to what made the series great in its first three instalments. Sadly, however, it really failed to achieve either of these goals. The first and only 3D instalment in the series, *Dawn Of Mana* was rather bizarrely influenced by *Half-Life 2*, which series creator Koichi Ishii saw at a trade show in 2004. Ishii loved the Havok physics engine used in Valve's landmark FPS and decided to license it for use in his PlayStation 2 *Mana* title, building the entirety of the gameplay around it. Big mistake!

Where the classic *Mana* titles merely mixed traditional role-playing stat progression with *Zelda*-like combat to create a fun yet deep combat system, *Dawn Of Mana* went for a much more obscure alternative. The idea was that you couldn't just walk up to an enemy and hit them; you had to startle them first by whacking an object toward them. The problem with this was that the Havok physics engine was a bit too realistic with its results and, more often than not, you'd whack an object only to see it bounce off in a completely unintended direction.

To make matters worse, *Dawn Of Mana*'s experience system was completely bizarre. You could gain levels like any other game, but as soon as you moved to a new area the game would boot you back down to level 1. The only way to permanently boost your stats was to kill enemies only after their Panic level had raised beyond 99 after you'd repeatedly scared them by smacking in-game objects in their direction. Given how difficult and frustrating this was, the prospect of permanently upgrading your character was enough to turn you off playing the game at all, which hardly makes *Dawn Of Mana* worthy of the 'true sequel' status.

Masters Of Mana

Yoko Shimomura

Quite possibly the greatest videogame composer of all time, Yoko Shimomura is responsible for many classic themes and scores including *Final Fight*, *Street Fighter II*, *Breath Of Fire*, *Kingdom Hearts*, *Parasite Eve* and *Little King's Story*, among many, many others. Shimomura wrote the soundtracks to both *Legend Of Mana* and *Heroes Of Mana* – two games that were, quite frankly, beneath her.

Shinichi Kameoka

Starting his videogame career on *Secret Of Mana*, Shinichi Kameoka designed the playable characters in that title, *Seiken Densetsu 3* and *Legend Of Mana* before leaving Square to form his own company, Brownie Brown, which developed *Sword Of Mana* in 2003. Brownie Brown's most recent work was on *Professor Layton And The Specter's Flute*, and it is currently developing *Fantasy Life* for Nintendo's 3DS.



» [DS] *Heroes Of Mana* is the series' most radical change of direction, but it works surprisingly well.



» [DS] Battles in *Heroes* range from small skirmishes like this to gigantic battles between the kingdoms of the world.

Heroes Of Mana

As a real-time strategy game, *Heroes Of Mana* is a world away from the accessible action gameplay that fans fell in love with in *Mystic Quest* and *Secret Of Mana* but, in spite of this, the 2007 DS game is a remarkably respectful entry in the *Mana* series. Although most *Mana* games are set in different worlds and can be considered separate games connected only by a few common elements like Rabites and the Mana Tree, *Heroes Of Mana* is actually a direct prequel to *Seiken Densetsu 3*, using that game's backdrop of warring states as the perfect setting for its epic, 50-unit-large strategy battles.

Entirely controlled using the DS's touch screen, *Heroes Of Mana* plays a pretty decent RTS while also retaining the look and feel of the classic *Mana* games. It's obviously not a patch on 'proper' RTS games like *Command & Conquer* or *StarCraft*, but it also needn't be so. Instead it's a more accessible game; a gateway to the genre for console gamers more used to action or turn-based RPGs.

The Future Of Mana

Heroes Of Mana's RTS gameplay makes it an unlikely saviour for the series, but it is without doubt the best game in the *World Of Mana* compilation and the series' greatest since 1995's *Seiken Densetsu 3*. But it's also not the way most *Mana* fans would like to see the series bow out. What we'd really like to see is a proper action-RPG that plays just like the Super Famicom games. With creator Koichi Ishii now gone from Square Enix it seems unlikely that we'll ever get such a game, but then Ishii is also the man responsible for alienating fans with the *World Of Mana* compilation, so perhaps it's time for someone else to take the reins, like the old team at Brownie Brown or *Secret Of Mana* producer and Square mainstay Hiromichi Tanaka.

While there are no official plans to create a new game in the series, it's clear that Square Enix hasn't forgotten about it yet. *Secret Of Mana* is due an iPhone release in early 2011, and fan demand for an official localisation of *Seiken Densetsu 3* is as fervent today as it was in 1995. The series may well be dormant, but it isn't dead yet.



Minority Report



This Minority Report has Retro Gamer returning to Amstrad's CPC 464, discovering an impressive Super Metroid clone on the SNES, running down endless corridors on both the Atari Lynx and MSX, and sniggering like a schoolboy thanks to the PC Engine

» ATARI LYNX



» [Lynx] The only real benefit from the small 3D screen is that it will occasionally point out harder to see objects like keys.



GAUNTLET: THE THIRD ENCOUNTER

■ SYSTEM: ATARI LYNX ■ DEVELOPER: EPYX ■ YEAR: 1990

■ ***Gauntlet: The Third Encounter* is unusual for a number of reasons, and not just because it's the first *Gauntlet* game not to feature all of the original four protagonists.**

Despite featuring prominently on the original box art – which, incidentally, was the same art used for the Mega Drive's take on *Gauntlet* – the Warrior and Elf are nowhere to be seen. Instead, the Valkyrie and Wizard are joined by a motley crew of characters that range from a punk rocker to a nerd who looks suspiciously like Chip from *Chip's Challenge*, another Atari Lynx game.

All the characters have their own stats and also have their unique weapons, such as books for the nerd and a parrot for the pirate. All in all there are eight different warriors to choose from, but we'll often pick the overpowered Android, as it's not only massively stronger than the other characters but also looks a bit like 7-Zark-7 from *Battle Of The Planets*.

The new range of characters isn't the only difference, as the gameplay has changed in a number of ways, and – to some gamers, at least – not necessarily for the better. Monster generators no longer feature in the game, so it's relatively easy to clear stages, as there's no chance of enemies reappearing. There's a new RPG-lite system included as well, which allows you to save and manipulate the various potions and food you pick up. Unlike the original *Gauntlet* games, you can actually save items and use them as and when they're needed. This in itself is rather useful, as there are a number of scrolls featuring handy abilities like invisibility

» AMSTRAD CPC

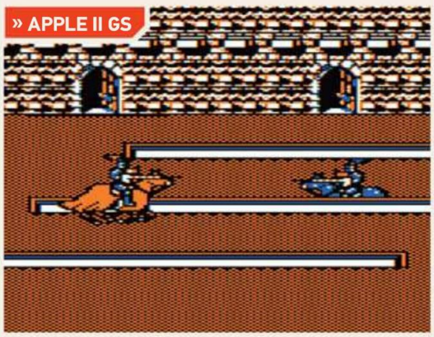


» XYPHOES FANTASY

■ SYSTEM: AMSTRAD CPC
■ DEVELOPER: SILMARILS ■ YEAR: 1991

■ **Sometimes a game** comes along and you wonder just how the developer managed to pull it off. *Xyphoes Fantasy* is one such game. Created by Silmarils, which cut its teeth in the French demo scene, it's a truly stunning-looking game that features some of the best visuals and smoothest scrolling that you're ever likely to see on the CPC. While it's a *Shadow Of The Beast* clone at heart, the huge levels, which load in large, *Savage*-style chunks; varied gameplay; and those glorious visuals will certainly keep your attention. The only real downside is actually getting hold of a copy.

» APPLE II GS



» CHIVALRY

■ SYSTEM: APPLE II GS
■ DEVELOPER: OPTIMUM RESOURCE ■ YEAR: 1983

■ **Now this is** a rather interesting little oddity. *Chivalry* is an intriguing blend between an RPG and a conventional board game for up to four players. At the beginning of each turn you'll roll a die or spin a wheel and be moved forward a few spaces. Areas are depicted using locations like a valley inn or a ferry, and you'll have to either take part in a mini-game or instead make a decision that could impact on a later turn. Although it can be a bit slow-paced at times, there is more than enough variety in the included mini-games to ensure that you never get bored. An interesting little game that's worth investigating.

» SNES



» PHANTOM 2040

■ SYSTEM: SNES
■ DEVELOPER: SUNSOFT ■ YEAR: 1995

■ **Ignore the fact** that this game was based on a cartoon show, which itself was based on the popular comic book hero, and instead revel in a superb *Metroid* clone that deserves your full attention.

While the visuals and audio are both of a high standard, it's in the impressive game design where *Phantom 2040* truly shines. It's not quite up to the standard of *Super Metroid* or later *Castlevania* games, but there's enough variety between the platforming and run-and-gunning to hold your interest, while the solid exploration and constant new weapons keep the game fresh and exciting.

» [Lynx] At the end of each game you're shown a nice scaling effect as the camera zooms in on your skeleton.





» [Lynx] Another way you can tell that this isn't really a *Gauntlet* game is the fact that hardly any of the original monsters make an appearance.





» ABOUT THE SYSTEM

- Created by Epyx, the Atari Lynx was originally known as the Handy Game
- It featured a number of cool features including the ability to flip the screen to cater for left and right-handed players, and the ability to play vertically
- Launch games included *California Games* and *Blue Lightning*

that you won't necessarily want to use when you first find them.

Computer terminals can also be found on certain levels. A new introduction to the franchise, they offer handy hints and tips, and allow you to spend the treasure scattered around each level. It's worth noting as well that you can only carry a limited number of items, so a small amount of strategy is needed, especially on later stages, which require a large number of keys to progress.

The reasons for these many changes are because *The Third Encounter* didn't actually start off life as an official *Gauntlet* game. Created by the Lynx's developer Epyx, it was originally known as *Time Quests And Treasure Chests*. It was later adapted to the more well-known *Gauntlet* name in order to increase its appeal.

The end result is an enjoyable enough little game that is let down in a number of key areas. Firstly, the speed of the game is rather sluggish, and it lacks the immediacy that the original arcade *Gauntlet* titles offered. The playing area is also cause for concern; while it's a nice touch that you play the game with your Lynx held vertically, you lose a large portion of the screen due to your inventory and a small 3D view, which looks cool but serves no real purpose. These additions, while nice in their own way, do mean that the playing area is quite cramped, especially when you're playing with three other players.

Although *Gauntlet: The Third Encounter* isn't really a 'proper' *Gauntlet* game, it remains a decent adventure and a solid addition to any Lynx collector's library.



» [Lynx] While there's a nice range of characters, it's a pity that theWarrior and Elf didn't make it into the game.



» COMMODORE 16



» FIRE ANT

■ SYSTEM: COMMODORE 16
■ DEVELOPER: MOGUL COMMUNICATIONS ■ YEAR: 1984

■ ***Fire Ant* was** released on a number of different systems, but we have a special affinity for the C16 version. Taking on the role of the titular ant, you're required to simply rescue your queen from the evil scorpions that have invaded your colony. It's a surprisingly clever game as well, as you can trick enemies into eating each other, flood pits and even plant explosives. The single-screen mazes often require a fair amount of lateral thinking to work out and there can be some frustrating deaths due to dodgy collision detection, but the core gameplay keeps pulling you back for one more go.

» MSX

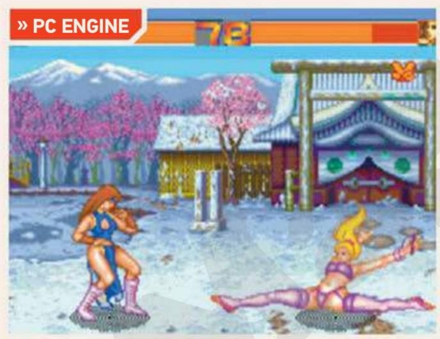


» THE WRECK

■ SYSTEM: MSX
■ DEVELOPER: ELECTRIC SOFTWARE ■ YEAR: 1984

■ **Fans of** *3D Monster Maze* and *Sultan's Maze* may well want to take a look at this intriguing MSX title, as it features a very similar premise. Taking control of a diver, you must explore a large ship, which looks suspiciously like a giant maze. The wreck itself is full of jellyfish and other annoying creatures, which will send you back to the start if you come into contact with them. Fortunately you're armed with a handy harpoon that can destroy most of the critters you encounter, so all you need to do now is fully explore the giant ship before your precious oxygen supply runs out. Easy, right?

» PC ENGINE



» STRIP FIGHTER II

■ SYSTEM: PC ENGINE
■ DEVELOPER: GAMES EXPRESS ■ RELEASED: 1993

■ **We could have** used the following words to introduce you to a hidden gem that's worthy of your time. Instead, we're going to use them to warn you away from one of the crappiest, laziest fighters we've ever had the misfortune to play.

Consisting of six instantly forgettable female fighters in various states of undress, it's a complete mess of a game thanks to rubbish controls, questionable collision detection and some naff special moves. People who are easily titillated might glean something from the half-nude ladies, but anyone else is just going to discover an incredibly bland fighter.



FROM THE ARCHIVES

RETRO GAMER DIGS UP THE FILES OF THE CLASSIC COMPANIES OF OLD

Brøderbund

From humble family origins to one of the biggest US software publishers of the last few decades, Mike Bevan traces the history of the company that brought us Lode Runner, Prince Of Persia and Myst

As the videogames industry neared its second decade, the console phenomenon that birthed the likes of Atari and Activision began to face increasing competition from another revolution in the making: home computers. The opportunity for dedicated hobbyists to create and publish their own software on inexpensive floppy disk or cassette became a reality, and anyone with the ambition, enthusiasm and a little know-how now had the chance to consider a career in the games business.

This was a notion that occurred to Doug Carlston, a Harvard-qualified lawyer who had been fascinated by computers since the Sixties. After graduation, he had secured a position with a prestigious law firm in Chicago, based in the city's famous Sears Tower, before moving to Maine to set up his own practice with a colleague. During his college years, a part-time job at Harvard's computer lab had introduced him to the joys of rudimentary programming, and adverts for the new generation of home computers showing up in popular magazines at the time intrigued him. He decided that the $400 to purchase a TRS-80, officially to help run his law office but off the record as something "to play around with" in his leisure time, might be a good investment.

Doug soon began to find coding addictive, especially without the long turnaround times of the mainframe systems he had experienced previously. Alongside a bunch of tax applications for the office, he started cranking out games as a means to hone his skills, the first of which was a space-themed strategy game called *Galactic Empire*. After contacting three software houses, he shrewdly struck non-exclusive publishing deals with all of them, one being Scott Adams International. *Galactic Empire* became the first non-adventure game the company ever released.

INSTANT EXPERT

Brøderbund was founded in 1980, as a part-time project for brothers Doug and Gary Carlston to distribute Doug's TRS-80 *Galactic Saga* games. The company grew into one of the major US games publishers, turning over around $300 million in annual sales at its peak.

Originally based in a rented house in Eugene, Oregon, the company relocated to San Rafael, California, in 1981, where it remained for the next ten years.

Brøderbund launched the careers of several notable designers including Dan Gorlin (*Choplifter*), Jordan Mechner (*Kareteka, Prince Of Persia*) and Will Wright (*Raid On Bungeling Bay*).

The company's well-regarded back catalogue includes other classic titles like *Lode Runner, Spelunker, The Castles Of Dr Creep, The Last Express* and *Myst*.

Unlike publishers such as Atari, Brøderbund promoted its programmers on packaging and advertisements, even letting them name games after themselves, like *David's Midnight Magic*.

Alongside games, Brøderbund became well-known for utilities and educational software.

By 1979 Doug found he was earning more as a programmer than as an attorney, with strategy sequel *Galactic Trader* under his belt, a third game, *Galactic Revolution*, under way, and weekly royalty cheques of several hundred dollars each, amounting to around $1,000 a month, rolling in. He made the brave decision to quit his law partnership, and opted to pay a visit to his brother, Gary, who was living in the sleepy town of Eugene, Oregon, on the other side of the country. Doug made the 3,000-mile journey west in his battered Chevy Impala with his beloved TRS-80 on the back seat.

Gary had recently departed a position at a local health charity, following an eclectic range of jobs that included teaching Swedish and coaching the national women's basketball team in Stockholm. Being of Swedish ancestry himself, he had majored in Scandinavian languages, also at Harvard. The brothers moved into a rented house, where Doug showed him some of the games he had written and proposed going into partnership in their own software publishing company. Not overly familiar with computers, Gary was at first reluctant.

"I told Doug I already owed two people money – including him – for businesses which never got off the ground and I didn't want to go through it again," he remembers. "He replied: 'How are you going to pay your share of the rent?' So I





PRINCE OF PERSIA

> **"My mother's sister sent all her grandchildren and even their friends to college with the proceeds of that stock"**
>
> AN EARLY INVESTMENT IN BRØDERBUND PROVES LUCRATIVE

got on the phone and sold $300 worth of his software with my first call."



Band of brothers

With Doug focused on software development and Gary in the role of salesman, the fledgling company began to find its feet.

"We didn't run ads, but we'd look for ads of people who were selling software and then we'd pick up the phone and call them," says Doug. Many of these contacts were happy to be buying directly from the authors. But by May 1980, the phone sales strategy began to show signs of strain. "We probably had about $900 per month in sales, which was keeping the wolves from the door but not very well," he adds.

Gary decided to take a trip to San Francisco with a suitcase of software to try to sell to computer stores in person. On this trip he managed to sell around $2,000 worth of cassettes, making enough to cover his ticket with a tidy profit on top. The brothers decided to invest more capital to allow Gary to do more travelling sales and visit computer shows to vend their wares.

"Doug had $700 worth of credit on his Visa card and we borrowed $2,000 each from our mother and her sister," says Gary. "Our brother Don chipped in $500. They all got stock. Later, my mother's sister sent all her grandchildren and even their friends to college with the proceeds of that stock.

"I then had a serious leg injury and was out of work for three months," he continues. "When I returned I took over responsibility for product development and acquisition, though the final decision to publish was made by a small committee, which always included both Doug and me. Maybe nobody else, now that I think about it. At least for the first few years."

Gary's flair for sniffing out a good product was demonstrated when the brothers arranged to rent a booth at the West Coast Computer Faire. Gary had brought his brother's games and an Apple computer. The booth next door was occupied by a Japanese firm called Star Craft, which had coincidentally brought some Apple games but nothing to demonstrate them on. Gary let them use his computer and was impressed by them. He quickly struck a deal to snap up the US distribution rights.

It proved to be a masterful move. One Star Craft title, *Apple Galaxian*, shifted over $100,000 worth of units in a single month. Other programmers in the US saw the games and were inspired to get in touch with the company, opening the floodgates for a wave of home-grown software for which Brøderbund would become famous.

"The third-party games came to us quickly after we published our first games from Star Craft," explains Gary. "The Star Craft games were technically superior ▶

BY THE NUMBERS

20 The number of separate platforms on which versions of the original *Lode Runner* were eventually released.

30 The number of international cities available to travel to in the original version of *Where In The World Is Carmen Sandiego?*.

60 The number of minutes given to rescue the Princess from the clutches of the evil Jaffar in *Prince Of Persia*.

64 The number of hostages held captive by the Bungeling Empire in each level of the original version of *Choplifter*.

5,200 The amount, in dollars, that the Carlston's borrowed from family members and Visa in order to set up Brøderbund.

10,000 The advance, in dollars, paid to *Lode Runner* creator Doug Smith as an incentive for him to expand the game and improve the character animation in time for the game's release.

20,000 The total, in dollars, that the brothers made between them in 1980, before the release of *Galaxian* for the Apple II.

6,000,000 The number of copies of *Myst* sold.



» [SNES] *Prince Of Persia 2* offered more of the same, albeit with slightly improved graphics and a greater abundance of cinematic cut-scenes.

TIMELINE

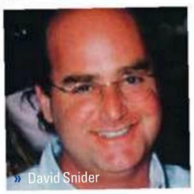
1978
DOUG CARLSTON BUYS A TANDY TRS-80 AND STARTS PROGRAMMING HIS FIRST GAME, *GALACTIC EMPIRE*.

1979
GALACTIC EMPIRE AND DOUG'S SECOND GAME, *GALACTIC TRADER*, ARE PUBLISHED BY SCOTT ADAMS INTERNATIONAL. DOUG RETAINS DISTRIBUTION RIGHTS, ALLOWING HIM TO SELL HIS GAMES DIRECTLY TO WHOLESALERS AND COMPUTER SHOPS.



» Doug Carlston (left) with Marc Canter, co-founder of MacroMind (later Macromedia), outside the San Rafael premises.

WHERE ARE THEY NOW?



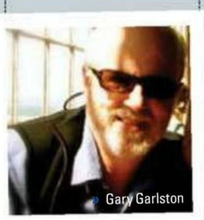
» David Snider

Doug Carlston "Doug created a programming language called Tawala, then discovered customers liked the demos more than the language," says Gary. "So he and a group fleshed out a demo into what they call a Sports Dashboard, which enables volunteer-based sports leagues to run their operations easily from year to year." He is now CEO of Tawala Systems and still based in San Rafael, California.

Gary Garlston After a ten-year stint in the property development market after leaving Brøderbund, Gary is currently making great pinot noir in "God's country", with a co-ownership in recently formed Tarras Vineyards (**www.tarrasvineyards.com**). "I have spent my life encouraging talented people to do great things," he says. "I'm now hoping I can work the same magic on my kids and also become a meaningful part of a new and spectacularly high-quality wine industry in New Zealand."

David Snider David retains his Brøderbund roots and an interest in the simulation of arcade amusements with his new company, Midnight Magic Games. He is currently working on a range of video poker iPhone/iPad games. For more details, see **www.midnightmagicgames.com**.

Dan Gorlin Following *Choplifter*, *Airheart* and *Typhoon Thompson*, and nearly two decades in the industry, Dan returned to his first love: music. He now teaches and performs with the African community dance and drumming outfit Alokli in Philadelphia.



» Gary Garlston

Dane Bigham On leaving Brøderbund, Dane became staff programmer at Dan Gorlin Productions, before founding Presage Software, which purchased the rights for the *Lode Runner* franchise in 1993, creating a number of well-received sequels. He's currently at IT consultancy Forte Systems.

Jordan Mechner As his screenwriting role on 2010's Disney blockbuster *Prince Of Persia: The Sands Of Time* testifies, Jordan's



» Jordan Mechner

profile has never been higher. The 2003 Ubisoft game on which the film was based – he worked on it as creative consultant – remains one of the most critically acclaimed titles of the last decade. His first graphic novel, *Solomon's Thieves*, was published last year, and he's rumoured to be working on a screenplay based on his classic adventure, *The Last Express*.

Will Wright After *Bungeling Bay*, Wright wrote a program called *SimCity*, and the rest, as they say, is history. Maxis, the company he co-founded, became a major industry player with the *SimCity* line and its many spin-offs, before becoming part of EA, publisher of his all-conquering *The Sims*, and the recent *Spore*.

to anything produced in the US, and American programmers wanted to meet the Japanese guys and find out how they did it, so they contacted us."

Midnight Magic

Despite Brøderbund's success with *Apple Galaxian*, the brothers' low profit margin – between 15 and 18 per cent – meant a single hit alone wasn't going to be enough to pay the bills, and they needed to expand their product range quickly. The decision to branch from the TRS-80 to Apple II software, and later platforms such as the Commodore 64 and Atari 400/800, was obviously a step in the right direction.

"We were initially concerned about picking the wrong horse if we stuck with just one computer platform," Gary admits, "but eventually it became a relatively easy business to port products from one to another. It also enabled us to acquire rights to products from any platform, whereas we would have missed out on some good ideas if we limited ourselves."

By 1981 a third Carlston, sister Cathy, had joined the company as office manager, and a second Star Craft arcade clone, *Apple Panic*, was selling nicely. The company was still very much a family business, with the three living in the same house: Cathy did the accounts in the kitchen, while Gary fielded phone calls in the living room and took turns with Doug packaging and stuffing disks. The brothers often worked 24-hour days in shifts to fulfil tight deadlines for orders. It was around this time that Gary received another *Galaxian*-style Apple II game called *Space Quarks* from a programmer by the name of Chris Jochumson. On booting the game he immediately called Chris and offered him $1,000 plus a percentage of the sales, making him one of the first onto Brøderbund's roster of regular contract programmers in the process.

Another of the first wave of US-based programmers to go on Brøderbund's books was David Snider, whose pinball simulation, *David's Midnight Magic*, proved a considerable hit for the company, and went on to win a game of the year award in *Electronic Games* magazine. "My family had purchased an Apple II in 1977," recalls David. "Around the time of my last college semester one of the coolest games I had ever seen came out: *Raster Blaster* by Bill Budge. It was a video pinball game based on the layout of *Firepower* by Williams Electronics. I had already decided that after college I would see if I could make a living writing software for the Apple II, and in case that didn't go well, I was pretty sure those big companies would still be glad to have me. After playing *Raster Blaster* a bit I knew I wanted to make something similar: a video pinball simulation.

"It was a challenge making the simulation feel 'right' on an 8-bit, 1MHz Apple II. Almost everything about the implementation involved doing more with less – for example, the movement of the ball involved computations using speed and acceleration vectors to determine its next position. We counted CPU clock cycles and microseconds to make sure what needed to happen did happen in the time available. When it worked,



1980 – BRØDERBUND OFFICIALLY FORMED, WITH BROTHER GARY IN A SALES AND MARKETING ROLE AND DOUG CONTINUING TO DEVELOP *GALACTIC SAGA* TITLES

1981 – GARY CARLSTON ACQUIRES THE US DISTRIBUTION RIGHTS TO APPLE II GAMES BY JAPANESE FIRM STAR CRAFT. ONE GAME RESULTING FROM THE DEAL, *APPLE GALAXIAN*, MAKES $100,000 IN SALES IN ONE MONTH. *DAVID'S MIDNIGHT MAGIC* IS RELEASED IN DECEMBER, RECEIVING A GAME OF THE YEAR AWARD IN *ELECTRONIC GAMES* MAGAZINE

1982 – *CHOPLIFTER* IS RELEASED AND BECOMES ANOTHER SUCCESS FOR BRØDERBUND. THE COMPANY'S PORTFOLIO IS BOOSTED BY JAPANESE TITLES LIKE *A.E.* AND *STAR BLAZER*, AND GRAPHIC ADVENTURE *THE MASK OF THE SUN*

1983 – *LODE RUNNER* AND *SPELUNKER* RELEASED. THE FORMER IS ONE OF THE FIRST GAMES TO FEATURE A LEVEL EDITOR

1984 – JORDAN MECHNER AND WILL WRIGHT DEBUT FOR BRØDERBUND WITH *KARATEKA* AND *RAID ON BUNGELING BAY*. OTHER RELEASES THIS YEAR INCLUDE *THE CASTLES OF DR CREEP* AND *THE ANCIENT ART OF WAR*

1985 – EXPLORATIONAL ADVENTURE *WHERE IN THE WORLD IS CARMEN SANDIEGO?* HITS STORES

1989 – MECHNER'S GROUNDBREAKING *PRINCE OF PERSIA* PUBLISHED FOR THE APPLE II. GARY AND CATHY CARLSTON DEPART THE COMPANY

1993 – *MYST* AND *PRINCE OF PERSIA 2: THE SHADOW AND THE FLAME* PUBLISHED

1998 – BRØDERBUND IS BOUGHT OUT BY THE LEARNING COMPANY IN A $606 MILLION TAKEOVER. DOUG CARLSTON LEAVES THE COMPANY



» [Amiga] Seaborne shooter *Typhoon Thompson In Search For The Sea Child* was Dan Gorlin's last Brøderbund game.



» [Apple II] *Karateka*'s distinctly cinematic stylings paved the way for *Prince Of Persia*.

> **"I knew Choplifter was a hit the moment I saw it. It was technically top notch and just plain fun"**
>
> GARY CARLSTON SPOTS ONE OF BRØDERBUND'S MOST ENDURING HITS

when the animations were right and the simulation felt real, it was great.

"I had a terrific time working with Doug and Gary. I'd say I spent more time working with Gary, talking about game design, brainstorming what we could add to a game to make it more fun. Doug enjoyed this, too, but he had to spend more of his time running the business side of the company while Gary would focus more on finding and developing new projects."

"We liked things that were a technical tour de force and fun to play. Nothing indecent other than occasionally blowing up things," chuckles Gary, describing the company's fairly relaxed product-selection stance. 1981 proved to be a fantastic year for Brøderbund, with the company booking over $1 million in sales, boasting a growing catalogue of hit Apple II titles, and completing a long-distance relocation to new premises in the hills of San Rafael, California. "After 18 months, the point when we drove a convoy down from Oregon and started up in California, things grew pretty quickly."

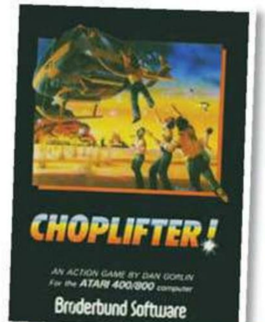
Choplifter

If the previous year had been a blinder for Brøderbund, 1982 started just as well when Dan Gorlin walked into a computer store in Los Angeles and mentioned a helicopter game he had been programming. The employee suggested he give the Carlstons a call. A musician by trade, Gorlin had been experimenting with a borrowed Apple II and, inspired by the recent Iranian hostage crisis, had put together an action game with remarkably realistic physics in which players piloted a rescue chopper in a bid to save US civilians from an oppressive militaristic regime.

"Even though they were just little white figures, this was the first computer-based videogame with animated people," says Gary, remembering his first encounter with Gorlin's creation, *Choplifter*. "Originally the helicopters were too hard to fly, so I asked Dan to make it a little less realistic and therefore a little easier. But I knew it was a hit the moment I saw it. It was technically top notch and just plain fun."

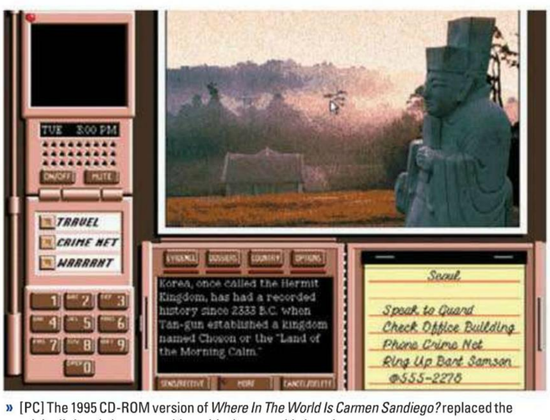
Gary's hunch proved right, of course. The game was massively popular, and later ported to a wide range of computer platforms and consoles. It also became one of two Brøderbund titles, along with *Lode Runner*, to make the journey east as an arcade game conversion, a feat few US-based companies have managed before or since. "We asked for much lower royalties than other American companies," explains Gary of the deal with the Japanese manufacturer, "but then we actually followed through and audited their books in Japan, which caught them off guard and probably evened out the amount they actually paid American companies for game rights."

Programmer Dane Bigham was behind the Commodore 64 ports of both *Choplifter* and *Lode Runner*, and ▶

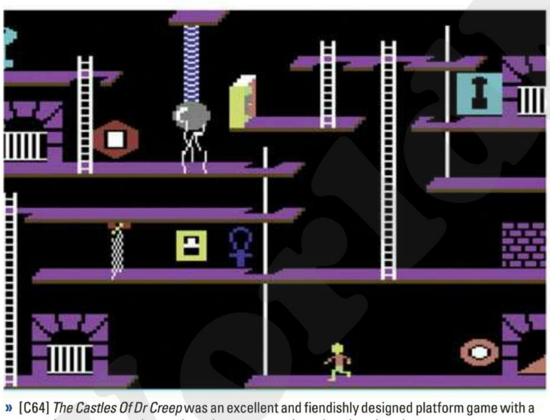


BEHIND THE NAME

The Brøderbund company name has led to much conjecture over the years regarding its origins, with many, including the press, assuming that the name arises from the Swedish term for 'brotherhood'. The roots of the name are, in fact, slightly darker in origin, as Gary Carlston candidly explains: "Unfortunately, Doug had slightly unprogressive reasons for originally using the name in one of his games. They were an insidious group of traders and he took the name from the South African Broederbond, which was a secret society of Afrikaners that took over the Civil Service and eventually became a shadow government during apartheid. Doug taught in Botswana in the Sixties and was familiar with the South African organisation. We changed the spelling to a more Scandinavian one to make it more benign – it mean's 'association of brothers' in any Germanic language – and to create a pun with the slashed Danish 'ø' and a computer Ø for zero. We did encounter some flak from university campuses for the name but encouraged those concerned to direct their energies more appropriately, as we had no influence on the South African government."



» [PC] The 1995 CD-ROM version of *Where In The World Is Carmen Sandiego?* replaced the original's hand-drawn graphics with photographic locations.



» [C64] *The Castles Of Dr Creep* was an excellent and fiendishly designed platform game with a two-player co-operative mode and a strong puzzle and exploration element.

FROM THE ARCHIVES

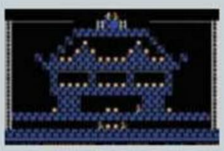


[PC] *The Last Express* used digital rotoscoping to painstakingly transform actors into hand-drawn animated characters.

SIX OF THE BEST



Choplifter (1982)
Channelling *Defender* and the Iranian hostage crisis, Dan Gorlin's rescue-'em-up became the first game to beat the VisiCalc spreadsheet on the US sales charts. Gorlin's eye for detail gave *Choplifter* a uniquely playable quality.



Lode Runner (1983)
Part *Space Panic*, part platform-puzzler, *Lode Runner* demanded fast reactions and even quicker thinking in order for players to make it through its dizzying number of levels and grab themselves a decent chunk of Bungeling loot.



Raid On Bungeling Bay (1984)
SimCity meets *Choplifter* in Will Wright's tactical shoot-'em-up. The game pits the player's lone pilot against the industrial war machine of the Bungeling Empire, with a scary battleship that must be destroyed before it can set sail.



Prince Of Persia (1989)
What Jordan Mechner achieved on the Apple II with his rotoscoped platform epic left industry veterans wide-eyed in amazement. The game went on to become one of the most ported of all time, selling over 2 million copies.



Where In Time Is Carmen Sandiego? (1989)
The fourth *Carmen Sandiego* instalment is a cracking game. Adding time-travelling to the globe-trotting formula proves a genius move as players track Carmen and her henchmen through history.



The Last Express (1997)
Despite disappointing sales, *The Last Express* was perhaps Jordan Mechner's most intriguing Brøderbund game. A Hitchcockian adventure set on the Orient Express, it was a hugely ambitious project with a real-time interactive narrative.

TWO TO AVOID



Prince Of Persia 3D (1999)
The success of *Tomb Raider* may well have inspired this final entry in the original *Prince Of Persia* trilogy. Unfortunately it's not a patch on any of Lara's adventures, with an overcomplicated control system, a flaky camera and a complete absence of the fluid animation that graced the first two games in the series. Tellingly, series creator Jordan Mechner says he only ever made it to the second level.

Stealth (1984)
Flying a low-level fighter plane through enemy-infested territory sounds exciting, but *Stealth* falls short in terms of playability or thrills. Looking like a cut-down version of the Sega arcade game *Buck Rogers: Planet Of Zoom*, it's pretty, but the monotony of your mission to destroy the Black Tower, for the most part represented by a dull black vertical line in the distance, soon kicks in.



remembers the experience of working with Gorlin well. "I was 18 years old when Brøderbund hired me," he recalls. "My first projects were conversions from Apple II to Commodore 64, and *Choplifter* was my first project. I absolutely could not believe my good fortune as *Choplifter* was a big hit and I played it in high school. Gary had Dan conduct my technical interview when I was being hired. Talk about intimidating!

"When I interviewed I concentrated on Apple II 6502 and put together a demo disk with a moving star field, but I had zero experience on the C64 itself. The bitmapped graphics were laid out differently, and the sprites were a whole new concept to me. Did you know that if you had sprite 7 enabled, then disk access would fail? Of course, just sometimes. That was hard to find. *Choplifter* and *Lode Runner* were cartridge-based, but there was a diskette version of *Lode Runner*, and you could save your own levels.

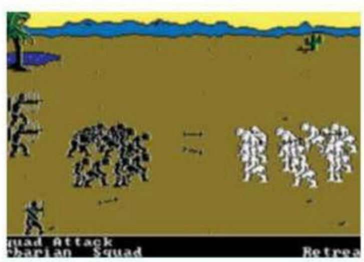
"The environment at Brøderbund was stellar – it was casual, programmers set their own hours, and the trust was deep. After three years I went to work for Dan, down the street from the company. He was finishing up his next game, *Airheart*, which would later morph into *Typhoon Thompson In Search For The Sea Child*. At his direction, we built a cross-development system on Sun workstations. We wrote all our own remote-control software that loaded the game onto the target computer."

The Bungeling Empire

Choplifter's success was influential on two other Brøderbund titles, which shared the dastardly antagonists of Gorlin's game: the Bungeling Empire. The first was Doug Smith's ingenious *Lode Runner*, a deceptively simple but addictive title consisting of 150 screens of gold-grabbing platform hi-jinks. "The graphics were smaller and cruder when it was first submitted, and it looked to me initially like a copy of *Apple Panic*," admits Gary. "Then, while playing it, I got up to about level 30 and I thought, 'Wow, these puzzles are really clever.' When Doug said he could improve the graphics and even put a level editor into the game, I was sold."

The second was a helicopter game from Will Wright, although with a top-down perspective as opposed to *Choplifter*'s horizontal view. The game was the C64 release *Raid On Bungeling Bay*, and in many ways it's one of the most fascinating of Brøderbund's products of the period. Looking at the game now it certainly looks like an early blueprint of what became Wright's signature franchise, *SimCity*. Dane recalls encountering Will's work at the time: "When he submitted *SimCity* for publication consideration at Brøderbund, sadly I opined that it was kind of boring. I was just one guy, and not in charge of such decisions. Man, was I wrong about that game. As you know, Brøderbund didn't publish *SimCity*, and Maxis was born. And the product line speaks for itself."

Another high-profile designer who got his big break with the company was a young Jordan Mechner, future creator of *Prince Of Persia* and *The Last Express*. Mechner's game was a beautifully animated, if slightly repetitive, take on the martial arts genre called *Karateka*, which, despite the Apple II's limited graphic abilities, shows a remarkable sense of cinematic flair. "I originally turned the game down because it didn't seem to have much gameplay," Gary reveals. "I had not yet sent the rejection letter when it



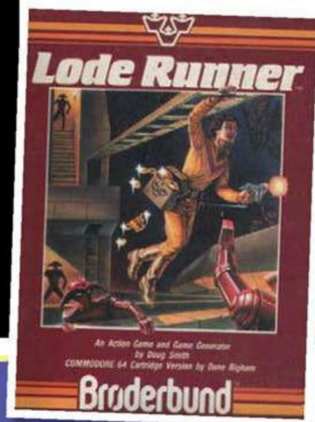
» [PC] *The Ancient Art Of War*, based on the historical strategy text by Sun Tzu, is widely regarded as one of the first RTSs.



» In Europe, much of Brøderbund's catalogue was distributed by Ariolasoft, a subsidiary of the German music publisher Ariola Records.

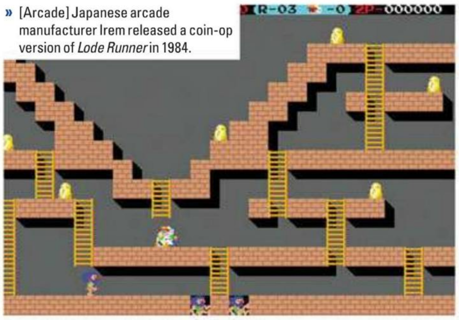


» [MSX] *Championship Lode Runner* was a package of 50 highly challenging levels designed by fans using the in-game level editor.





» [PC] *Myst* was a surreal adventure with stunning rendered graphics that broke sales records for Brøderbund and helped usher in the CD-ROM era.



» [Arcade] Japanese arcade manufacturer Irem released a coin-op version of *Lode Runner* in 1984.









» The Carlstons pose for an *Antic* magazine interview in October 1983 (left to right: Doug, Cathy, Gary).

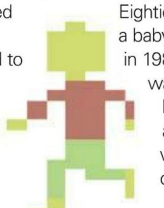
turned out that we had an empty computer monitor at the Chicago CES and we needed something to put there. Since *Karateka* was pretty we used it. Naturally that was the monitor everyone gravitated toward, so we signed Jordan up."

Prince Of Persia and beyond

Signing Mechner proved to be another of Gary's many smart moves by the time of *Prince Of Persia*, a smash hit platform game that broke new ground in terms of art direction and animation, and kick-started a blockbuster franchise. "I watched Jordan and his team create this game in offices they shared with us," remembers Gary. "I was struck by how Jordan used video footage of real people to create the animation. We're used to this kind of thing now, but then it was really innovative. Also a heck of a lot of work."

Although he had officially left Brøderbund by the time he encountered Mechner's Apple II original, Dane Bigham was involved in the Macintosh version, and remembers him well. "Even when he was around with *Karateka* he was writing screenplays," he says. "*Prince Of Persia* was astounding. I took home an Apple II and didn't leave my house for a few days. I immediately approached him and got my then company, Presage, the job to convert it to the Mac, in colour, with vastly upgraded graphics and sound and music."

Sadly, the production of that game was one of the last Gary would witness at the company he had co-founded, when he resigned from his position at the end of the Eighties, along with Cathy, who left to have a baby. "I remember one of our competitors in 1982 saying that word on the street was that we would go out of business because we fought so much," he admits, referring to his relationship with Doug. "The reality was the opposite. While the fighting was actual, the prospect of getting in trouble with our parents if we blew Mom's 2,000 bucks kept us from actually breaking up. At the same time, when I finally left in 1989, I remember saying that I wanted us all to go back to being a family; that I couldn't stand being business partners any more."



The late Eighties and early Nineties would also bring successes like *Prince Of Persia 2: The Shadow And The Flame*, *Carmen Sandiego* and *Myst*, the bestselling PC game ever until *The Sims*. In 1998 Brøderbund was acquired by The Learning Company, which laid off around 500 employees, a point at which Doug decided to take his leave. The Learning Company was swallowed up by Mattel a year later, and the publishing rights for the company's back catalogue, including *Myst* and *Prince Of Persia*, are now in the hands of Ubisoft.

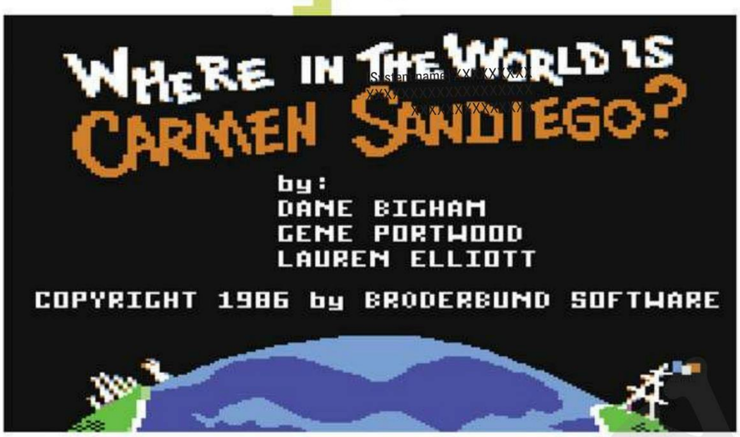
Despite being over 20 years since he left, Gary still regards his time at Brøderbund with fondness. "Even when we were most stressed out, I would say to people, 'We will remember these as the good old days,' and we do," he says. "We recently held a reunion where hundreds of people came, even though the company folded 12 years ago. I've really enjoyed the successes of people like Jordan and Will, and many others who have succeeded in less public ways. I'm still friends with all of them."

CARMEN SANDIEGO

One of Gary's most personal projects was *Where In The World Is Carmen Sandiego?*, which sought to teach geographical trivia while the player's agent tracked the notoriously elusive Carmen and her henchmen in a globe-trotting adventure. The game spawned a host of sequels, and later CD-ROM remakes, board games and even a TV series. "I remember how fascinated the three brothers in my family had been with almanacs when we were kids," says Gary, "constantly quizzing each other on everything from state capitals to tallest mountains, so I wanted to encourage that in an adventure game. *Carmen* wasn't meant for the educational market; it was simply intended to be a socially redeeming computer game. It languished for about 18 months in the marketplace and then suddenly teachers found out about it and kids started playing it at school."

"*Carmen* was a true collaboration," says designer Dane Bigham. "I was working on an adventure game for kids, as a concept, which started to evolve into a mystery/cops-and-robbers theme. Gary introduced *The World Almanac*. Gene Portwood and Lauren Elliott worked as artists and character designers. They really brought the character and story to the table, and Gene's humour is legendary at Brøderbund.

"It was very deliberate that our products be a game first and educational second. In fact, the product was categorised as 'explorational' because the categories 'educational' and 'edutainment' had a stigma of being boring. My role in *Carmen*, besides programming, was to design the gameplay. The whole mechanism for chasing from city to city, how that was paced, and that the player 'logged in' with their progress tracked over time, was my work. Can you tell I am proud of it?"



Psycho Fox



Despite being part of the most derivative game genre in existence, *Psycho Fox* has become widely known as 'that Master System game with similar gameplay to those other two games'. Those games are, of course, *Kid Kool* and *Magical Flying Hat Turbo Adventure* (rebranded *Decap Attack* in the West), and with all three titles connected by the same developer it's little wonder they're comparable. Still, possibly one of the only games in existence to have two spiritual predecessors which are themselves linked spiritually, and telling the story of a psychotic fox battling a mad one, *Psycho Fox*'s story is certainly bizarre and its lineage somewhat mystifying. Stuart Hunt attempts to make head and tail of this classic 8-bit platformer.



MONKEY
If you want to scale ledges and platforms, the monkey is the animal for you. He can jump higher than all the other animal forms in the game, though he moves slowly to compensate. Bananas are his favourite.



TIGER
The tiger is basically a super-powered version of Psycho Fox. Harnessing the power of the tiger gives Psycho Fox the ability to accelerate faster and jump higher. Human parts are his favourite.



HIPPO
The hippo is the least agile of the three animal forms but does have one useful ability in that he can smash through walls. He's essentially a power character. He has a taste for white plastic marbles.



BIRDFLY
In addition to platforming, Psycho Fox and his animal forms can also smash open eggs to free Birdfly: a small, crow-looking companion that can be fired at enemies like a boomerang.

MEMORABLE MOMENTS

WHY IT'S A CLASSIC



Master System's Mario

With seven worlds, each with hidden areas and multiple paths, *Psycho Fox* featured more to discover than your average SMS platformer. Adding to its charm was its multifaceted hero, who could change into different animals to help him get around. Fox achieves this by collecting magical shinto sticks (aka Psycho Sticks), and uses them to transmute into three other animals, each with different attributes. Proving popular, this character-swapping mechanic appeared in quite a few platform games following *Psycho Fox*'s release – from *Rolo To The Rescue* to the excellent *Kid Chameleon*.

BEST CHARACTER?



Psycho Fox - Revered In Japan

Foxes might be considered a nuisance here, but in Japan they're practically megastars. Known as kitsune, Japanese folklore depicts foxes as intelligent creatures with magical powers, and they've appeared in games by some of Japan's most esteemed developers. The most notable examples where foxes appear in games include the *Star Fox* series and *Sonic 2,* where one played Sonic's squeaky-voiced sidekick, Tails. Speaking of Tails, some legends also say that the more tails a fox has the more powerful they are – Tails can therefore be seen as the Harry Potter of videogame foxes.

HOW IT PLAYS



Physics Fox

Psycho Fox isn't the easiest game at first. Movement feels a little overzealous because it uses inertia-based physics. This means jumping from a stop is pointless, and it takes time for Fox to build up acceleration for his run. More frustrating, he can only take one hit before snuffing it, and you're dropped back to the start of the level. However, with perseverance and some sacrificial hair, you get used to his skittishness, and learning when to use his animal forms helps to soften the difficulty. In the end, *Psycho Fox* does a competent job of meshing together the pace of *Sonic* with the exploration of *Mario*.

A FOX TALE



The Story Explained

Like most platform games, *Psycho Fox*'s story is bananas. It tells the tale of a bad fox deity named Madfox Daimyojin, who sets about using his magical powers to conquer the land and populate it with an army of unpleasant creatures. Apparently the best way to thwart a mad fox is to simply send in a psychotic one, and so the people of the land call upon Psycho Fox to lend a hand. Using his decidedly un-psychotic metamorphosis powers, Psycho Fox embarks on a mission to thwart Madfox, restore peace and get crowned king. Something like that anyway… the king part we just assumed was a given.

RANDOM MINI-GAME



Walk The Line(s)

Pick up some cash bags during the game and between stages you can partake in a random-win mini-game. Requiring zero skill to play, you're presented with a choice of trails on which to plonk Psycho Fox (or Psycho Foxes, depending on how many bags you've collected). Obscured from view, each of the trails' ending leads to either something good – extra lives or a nice transmute stick – or something rubbish like a hole to fall down. With your trails chosen, you then get to watch as your Psycho Foxes walk up the path on autopilot, occasionally changing direction at the points where they connect.

A SORT-OF SERIES



A Spiritual Guide

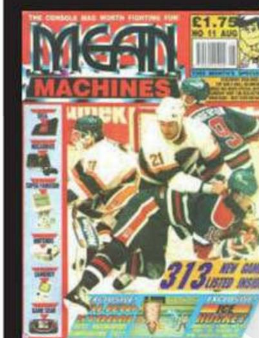
Psycho Fox is part of a family of platform games that includes *Kid Kool* and *Magical Flying Hat Turbo Adventure*. What connects these three games is that they all feature heroes that move with momentum and use a boomerang-like projectile weapon. Tec Toy also released its own take on *Psycho Fox* for the SMS. Titled *Sapo Xulé: Os Invasores Do Brejo*, it's identical bar some graphical changes: it changes Fox into a toad (said to have been based on a popular toy in Brazil) and replaces the original animal forms with a pig, a turtle and a mouse. Some of the bosses were also altered too. We call it 'Mental Toad'.



IN THE KNOW

- **PLATFORM:** SMS
- **PUBLISHER:** SEGA
- **DEVELOPER:** VIC TOKAI
- **RELEASED:** 1989
- **GENRE:** PLATFORMER

What the press said… ages ago



Mean Machines, 90%

For a Sega game, the graphics are pretty good, with well-animated sprites and varied backdrops. But it's the gameplay and lastability that count.

ACE

Psycho Fox is very much a game for platform game aficionados. It is *Mario*-esque and features some very tough pieces of platforming. It has real lasting value.

What we think

We agree. The graphics look and animate brilliantly for a SMS game. But its appeal isn't just skin deep; there's a lot of tough game to work through too. For us, it's the best game in Vic Tokai's bizarre platforming trilogy.

The Bluffer's Guide To:

Isometric Games

Debuting in arcades before finding a final resting place on personal computers, the isometric point of view is one that has clearly been gradually outmoded by advances in game graphics. **Stuart Hunt**, with help from Sandy White and Jon Ritman, looks at the rise and gradual fading of this once great king of videogame perspectives





» Sandy White told us that one of the benefits of the isometric perspective is that it is a handy way to create 3D worlds with limited computing power.



» Jon Ritman was 'blown away' when he first saw *Knight Lore* running, likening it to playing a Disney cartoon at the time.

Like most things associated with videogames, the inception of the isometric viewpoint can be traced to arcades. 1982 is the year that marks the release of two quite contrasting arcade games that garnered much attention for utilising a skewed visual perspective that wasn't quite side-on and wasn't quite top-down either. The first was Sega's *Zaxxon,* a shoot-'em-up in which players had to storm a floating enemy base to destroy a large, boxy-looking robot that resembled a jukebox; and the second was *Q*bert*, a game about an orange nose repainting panels of Escher-style pyramids using the bottom of his feet.

With just two titles to its name, at this early point the term 'isometric game' clearly hadn't been adopted by gamers. It's a notion evidenced by *Zaxxon*'s title, which is said to have been inspired by the somewhat dry term 'axonometric projection': the umbrella name by which the three marginally different flavours of a parallel projection – isometric, diametric and trimetric – are all grouped. Had, of course, the word been 'isometric', the game's title would have been *Zissom*. To be fair to *Zaxxon*, though, axonometric is actually a more accurate term to classify isometric games for the reason that most use a method of diametric projection, in which only two of the three angles across the three axes measure the same, rather than 'true' isometric, whereby all of the three angles intersecting the three axes are equal. Confusing matters further, there are some games, such as *SimCity* and *Paperboy*, that use trimetric, a method of parallel projection in which all three angles are unequal.

As we're on the subject of what is and isn't isometric, here is probably a good time to clear up exactly what our classification of an isometric game is, to avoid confusion and us receiving a flood of angry letters. To help us explain, simply pick a corner of any normal four-walled room, walk directly into that corner until you can't walk any more, turn yourself 180 degrees, and then position your shoulders so that they are evenly rested against the two sides of the wall that make up that corner. Now make a mental note of how everything looks. If you're playing a game that gives you even the slightest impression that you're observing its world in this peculiar way, chances are it's probably what we would deem to be 'isometric'.

Before the advent of isometric projection, 3D game worlds existed but were constructed using a vector graphics generator, and the earliest examples of this can be seen in Atari's *Battlezone* and *Red Baron*, both released in 1980. While this technique was certainly effective in creating immersive games, these vector-generated 3D worlds did feel sparse and lacking in colour – many relied on the use of colour overlays. Isometric projection allowed developers to get around many of these issues and allowed 3D

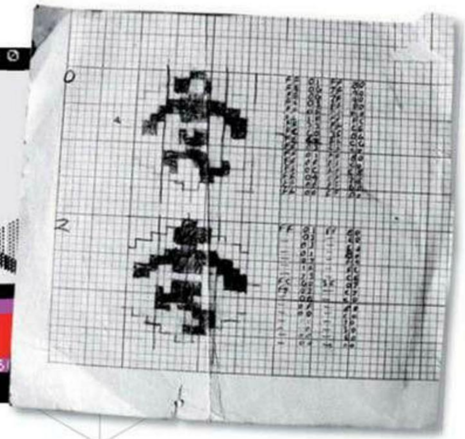


worlds to be constructed using very little computer power and built using bitmaps and sprites, affording them colour and far more detail. Its fixed perspective also gave players far better perception of their environment, as they could see the full space surrounding their avatar without the need to move, making environments far easier for players to identify with.

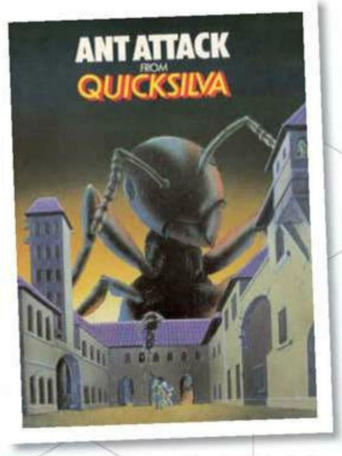
As well as its distinct visuals, one of the things that set *Zaxxon* apart from other shoot-'em-ups of its day – with the obvious exception of *Red Baron* – was that success rested on deft flying as much as it did deft shooting. Victory couldn't just be achieved by adjusting your ship to the same altitude as incoming enemies and pressing fire; in an isometric game, you had to effectively mirror the full position of enemies on screen inside a 3D space. This is something that is inherent to the gameplay of all isometric real-time action games, coming into play in all sorts of scenarios, be it trying to jump on a platform, pick up an object or flick a switch. They literally require you to think in another dimension.

Surprisingly, when you consider that it was the first, *Zaxxon* is a game that clearly understood the complications this could pose on the poor brain of the player: it considerately provides players with an altimeter so that they can easily establish the height of their spaceship at all times – although *Battlezone* did a similar thing with radar. But while innovative, offering vertical movement on the y-axis clearly wasn't a popular one given that it was not adopted by subsequent isometric shooters, following the release of *Zaxxon* and its sequels. Likely for the reason that worrying about your ship's altitude distracts from the shooting, games such as Costa Panayi's *Highway Encounter* and SNK's *Viewpoint* kept things much simpler by setting their action on and close to ground level. Even *Zaxxon* dropped the feature for the sequel, *Zaxxon's Motherbase 2000*, replacing it with a jump mechanic.

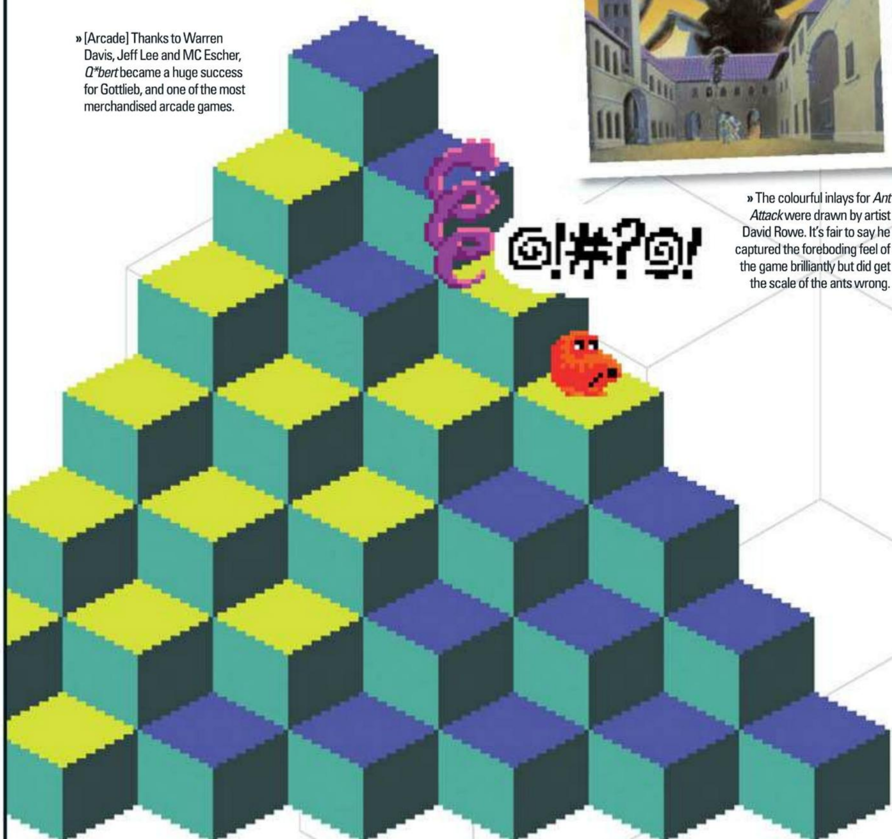




"Isometric graphics made games far easier for players to identify with"



» The colourful inlays for *Ant Attack* were drawn by artist David Rowe. It's fair to say he captured the foreboding feel of the game brilliantly but did get the scale of the ants wrong.



» [Arcade] Thanks to Warren Davis, Jeff Lee and MC Escher, *Q*bert* became a huge success for Gottlieb, and one of the most merchandised arcade games.

It's this total movement in a 3D space that contributes to a common problem plaguing many early isometric games appearing on 8-bit home computers: controls. Most featured stiff four-way movement, and this affected the fluidity of gameplay and responsiveness of characters. This was rarely an issue in arcades, though, with a number of developers considering how best to cater for skewed movement in an isometric environment. *Q*bert*, for instance, featured a four-way joystick positioned diagonally to ape the slant of the titular character's movement around the pyramid, *Marble Madness* used a trackball control system, and *Paperboy* even used replica handlebars. Over time, software developers began to rethink how movement could work better in an isometric projected 3D space and made better use of joysticks and D-pads to offer players eight-way movement. System 3 even went so far as to introduce the fancy-sounding 'Relative Movement' system for *The Last Ninja*, which utilised a combination of joystick and simultaneous fire button holds to beckon an exhaustive number of moves from the game's ninja.

Antescher: ants meet Escher

Written by Sandy White, with some help with artwork from his then-girlfriend, Angela Sutherland, *Ant Attack* is a landmark game in the history of isometric games. Released for the Spectrum in 1983, it is notable for being the first isometric game to offer players the freedom to basically drag the camera wherever they fancied in the game world, also allowing players to rotate the camera clockwise and anticlockwise between four angles, ensuring that they always had the best possible view of the action. Sandy's innovative engine, named Softsolid 3D, was developed on the Acorn Atom and put to use on the Spectrum, making it one of the first machine-independent graphics engines ever made. *Ant Attack* not only birthed what the *GTA III* generation now like to call the 'sandbox' game, owing to its free-form gameplay set in a large static world, but can also be seen as the first application of isometric visuals in an adventure setting – a relationship that flourished in the years to come.

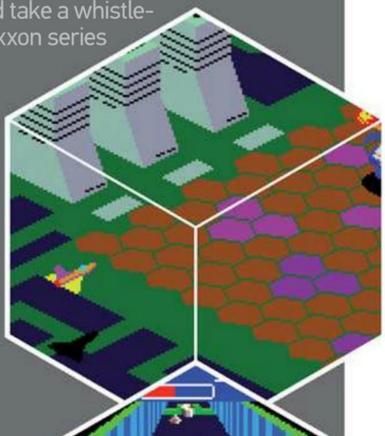
Sandy explains how he came up with his groundbreaking 3D engine: "The Atom was the first computer I'd had access to which had bitmapped graphics. I think it could do 64x64 pixels in four colours – not state-of-the-art even then, but the point was I had one, and while trying to earn a little money writing some business app for someone, I had discovered that it could generate shapes on screen. Now I had a plan to make some kind of virtual artwork and started experimenting with graphics using Atom BASIC. I remember it being pretty easy to get the Atom to generate random lines and rectangles, but I wanted something three-dimensional.

The Mini History Of Zaxxon

Given that it's the first, we thought we'd take a whistle-stop tour of all the games in Sega's Zaxxon series

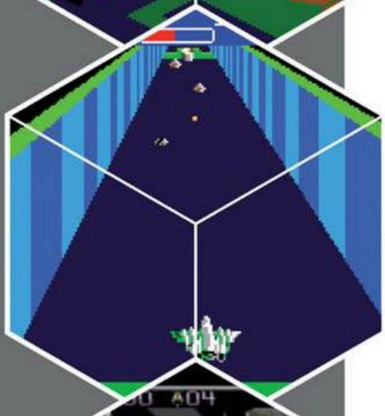
Super Zaxxon / Arcade / 1982

Following the success of *Zaxxon*, Sega promptly turned out a sequel in the same year. As you would expect, given its speedy turnaround, *Super Zaxxon* plays more like *Zaxxon 1.5* and features some tweaks to the original game to make it more challenging. These include a two-player mode, having your ship move faster, altered level layouts – including the frustrating dogfight section in the original replaced with a tunnel fight – and a few new enemies, including the Zaxxon robot being bizarrely replaced by a trio of robot Chinese dragons. Sega even ported this version to a small number of 8-bit computers, including the Commodore 64.



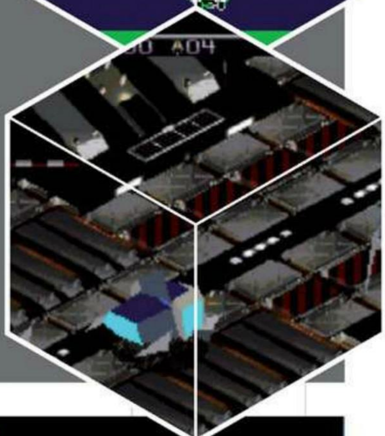
Zaxxon 3D / Master System / 1987

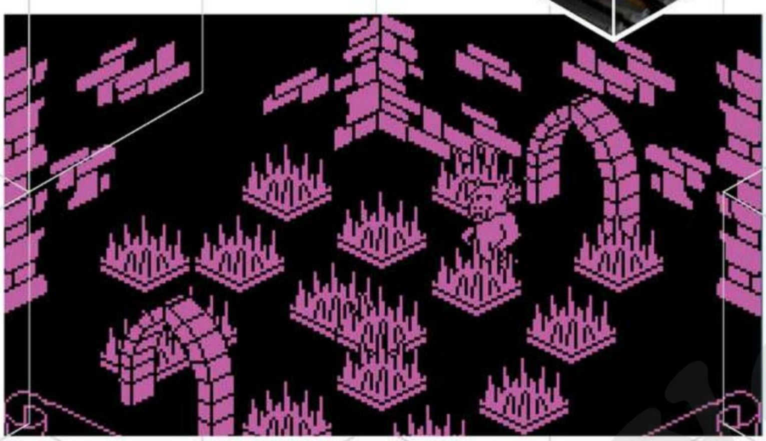
Doubling up its 3D-ness by making use of Sega Scope – the 3D glasses released for the Master System – *Zaxxon 3D* is a weird into-the-screen take on Sega's seminal isometric shooter. It shares very little similarity with the arcade game it's based on and begins with a fiddly dogfight in space, before changing into something that feels a bit more *Zaxxon*-like as you guide your ship down a corridor primed with gun emplacements, brick walls and fuel cylinders to shoot. Each level then ends with a boss fight. It's okay but feels bugger all like *Zaxxon*.



Zaxxon's Motherbase 2000 / 32X / 1995

Released exclusively for Sega's ill-fated Mega Drive life-support machine, *Zaxxon's Motherbase 2000* is an ugly-looking sequel that mixes 2D-rendered diagonally scrolling backgrounds – as opposed to clean, crisp, isometric ones – with crude, jaggy-looking polygon ships and robotic enemies. The most novel aspect of the game is that your underpowered ship has the bizarre ability to jump inside secondary insect-style vehicles in the game and use their firepower. Ultimately, the game is more *Viewpoint* than *Zaxxon*, as the action always remains close to ground level.







"With a bit of head-scratching, I worked out how to get it to plot a three-dimensional cube. It turns out that if you plot a line in bitmapped graphics by going along two pixels, up one pixel, along two, up one and so on, it is a nice fit for drawing the top face of a 3D cube. Remember that old protractor you used to use at school – or is that just me? – for doing isometric projections: 30/60 degrees? It turns out two pixels along for every one up makes angles of 26.6/63.4 degrees: so close to old protractor angles that even old Mr Steel the tech teacher would have approved. So it turns out that my art project was drawing 'isometric' shapes, even though I hadn't recognised them as such. The big excitement came when I wrote a loop to plot these cubes at random positions on the screen and suddenly saw wonderful foreign, exotic cityscapes growing and sprawling before my eyes: walls and tower blocks; ditches and embankments appearing and disappearing. I remember getting that feeling in my gut where you go: 'There's something special about this.'"

Despite the game's ant-infested city of Antescher comprising simple monochromatic blocks, *Ant Attack* succeeded in feeling more immersive than most 2D games loaded with sprites and colour, showing brilliantly how it's the world that is the beating heart of every classic isometric game.

Released the following year, *Knight Lore*, Ultimate Play The Game's second groundbreaking sequel to *Sabre Wulf*, transformed the face of isometric games. Written by Tim and Chris Stamper, the game's innovative flick-screen isometric engine, coined 'Filmation' by the brothers, created the most detailed-looking environments ever seen on 8-bit computers and quickly jetted isometric games – and Ultimate – to prominence.

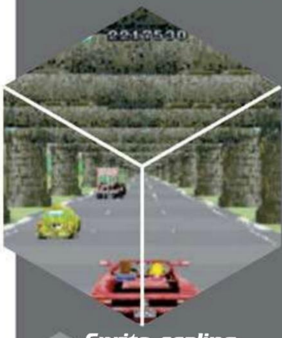
Set inside a wizard's castle, *Knight Lore* saw the popular pith-helmeted adventurer Sabreman on a quest to cure a case of lycanthropy, and the impressive power of Filmation filled its gothic world with lavish detail and a variety of objects to use and manipulate. Not only were *Knight Lore*'s isometric rooms beautifully drawn and dressed, but the engine's distinct look gave the graphics a striking and beautiful cartoon quality that left both gamers and critics alike suitably slack-jawed.

"I think everyone was surprised by *Ant Attack*, but the simplistic graphics meant it was never going to have the impact that the later *Knight Lore* undoubtedly had", remembers Jon Ritman, coder of the classic isometric games *Batman* and *Head Over Heels*. "I was blown away when I first saw *Knight Lore* and still remember the moment – a gamer's version of remembering where you were when you heard Kennedy or Lennon had been shot. For me, it was a simple feeling of playing a Disney cartoon: exactly what I wanted in a game. There had, of course, been 3D games before, but they had all been first-person and a lot of people had problems grasping that when combined with the simplistic vector graphics that were used for them. The isometric system was much easier for the player to instinctively understand."

Owing to its popularity, Ultimate swiftly followed up *Knight Lore* with two more Filmation games: *Alien 8* in 1984 and the fourth and final 'released' game in its Sabreman series, *Pentagram*, in

Alternate Dimensions

We look at a few of the other methods used by developers to create depth in game worlds



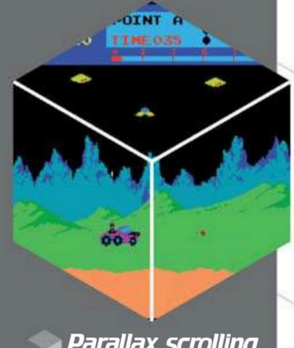
Rotoscoping

A basic method of motion capture popularised by the band a-ha and utilised in games such as *Karateka*, *Prince Of Persia* and *Flashback*. The rotoscoping technique basically involves artists meticulously tracing over live-action film, frame by frame, to ensure smoother and more realistic animation for characters in games. These are usually human, although the method works on all animals.



Vector graphics

Atari's *Battlezone* was a revelation. Notable for being the first game to plonk players inside an immersive 3D world, it achieved this sensation through clever manipulation of a vector generator developed by Howard Delman. Programmed by Ed Rotberg, *Battlezone* was a 3D tank combat simulator inspired by early top-down tank games. The 3D technique was also used in Atari's *Red Baron*.



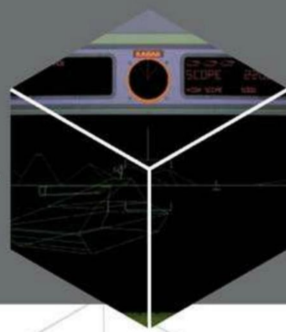
Sprite scaling

Sprite scaling is a technique that is most commonly used in racing games. Seen in pretty much everything that Sega put out in arcades during the early Nineties, it is used to offer the sensation that you are moving forward by getting background sprites to gradually and simultaneously increase in size, usually whenever the user accelerates in the game.



Clay animation

One of the forms of stop-motion animation, clay animation has only been used in a handful of videogames over the years, including *ClayFighter*, *The Neverhood* and *Primal Rage*. It is a method by which characters and worlds are modelled in clay, or an equally pliable material, and then each individual frame of animation is meticulously modelled and photographed before then being rendered.



Parallax scrolling

Parallax scrolling is a simple technique, commonly seen in side-scrolling games. The world is divided into layers, with those furthest away scrolling slower than the foreground, giving the illusion of depth. In some games, to add a further level of immersion, an additional layer is added in front of the playfield. The technique first appeared in Irem's *Moon Patrol* in 1982.

1986. Nestled between the release of these games, though, was another important Ultimate title; one running from a revised version of the Filmation engine. Debuting in the 1985 game *Night Shade*, Filmation II featured a number of enhancements. Not only could it produce smooth isometric scrolling, but it was also able to make sections of the environment transparent so as to never obscure the main character from view. This trick allowed Ultimate to incorporate multiple buildings in its Filmation II games, making its worlds feel more open.

The Knight Lore Effect

Knight Lore had a significant impact on 8-bit gaming and would kick open the floodgates, causing a wave of similar-looking isometric titles from other developers to appear on home computers. While a great many of these titles were quite derivative – and many more entirely forgettable – there was also a raft of great ones.

Examples of the latter included all the games by coder Jon Ritman and artist Bernie Drummond. The duo's first isometric game, *Batman*, was a polished and gorgeous Filmation-style action-adventure, and is notable for being the first videogame to ever star DC's famous Caped Crusader. But it was Ritman and Drummond's second collaboration, *Head Over Heels*, which many consider to be their finest hour. One of, if not the, best isometric games of all time, *Head Over Heels* utilised an enhanced version of the *Batman* engine that allowed players to switch control between two characters at any point during the game. While a similar feature could be first seen in the isometric adventure game *Pyracurse* by Hewson Consultants in 1986, never had it played such a prominent role in the gameplay, with Head and Foot having to split up and work together to solve puzzles in the game. A popular mechanic, it was Jon's original intention to incorporate this buddy system into *Batman*, and have Robin appear as a second playable character, but at the time he was unable to work out how to make such a feature work.

"There were several things that made writing isometric games harder than a standard 2D game," Jon says, when explaining to us some of the typical issues he faced when creating his isometric games. "The graphics were larger and also needed a separate mask doubling their size on the Spectrum; this, in turn, made the small amount of memory a problem, so many techniques had to be adopted to try and save space elsewhere. In the case of *Head Over Heels*, I used several methods, including bit-streaming and templates to reduce the map size to the minimum: 301 rooms in 5k, an average of only 17 bytes a room, and an empty room only taking 7 bytes to describe the wallpaper, the shape, door type, door position, flooring and colour scheme. In addition, there were complex calculations to sort the ordering of the objects in the room – actually an impossible thing to get correct 100 per cent of the time – and finally the masking system for drawing the images. Again, space was of the essence here: *Knight Lore* used a 6k buffer to manage the masking; *Head Over Heels* did it with only 256 bytes."

One of the most surreal 8-bit games to ever find release, *Head Over Heels* saw players help two intergalactic spies, Headlus Mouthion and Footus Underium, bring liberation to a cluster of planets and defeat the evil 'Emperor'. Chock full of bizarre creations conjured up by the fertile imagination of Drummond, with the Prince Charles Dalek, who acts like a forklift, clearly the standout, *Head Over Heels* was a brilliantly crafted adventure game and remains one of the most popular and original isometric games ever. Contrasting the outlandishness of *Head Over Heels*, though, the mid-Eighties also saw the isometric viewpoint being



» [Arcade] Controls are a sticky point in early isometric games. In arcades it was less of an issue, thanks to many making use of imaginative control schemes, such as the trackball in *Marble Madness* and handlebars in *Paperboy*.

used by many developers to create cinematic, character-driven graphic 'adventure movies'.

Bo Jangeborg's *Fairlight* is one such title. Creating his own impressive engine that could construct smooth-scrolling isometric worlds, *Fairlight* followed the story of a reluctant adventurer named Ishtar who is tricked into exploring a medieval castle to find a missing book for a sorcerer. With a notably less cartoon-like appearance to *Knight Lore*, Bo was clearly striving for realism with the game. This was certainly true for the game world, which featured objects that could be manipulated and abided to physics in a realistic way. For instance, Ishtar could push chairs faster than heavier objects like tables, and only had a limited space in his pockets to carry items, meaning that he would have to drop lighter items to free up carrying space for larger ones.

Two of the most popular isometric adventure games to find release were from Denton Designs. *The Great Escape* was an unofficial tie-in to the 1963 movie and was made famous for its unique and innovative gameplay. Set inside a German POW camp, players had to find a way to escape incarceration while being careful not to draw attention to their actions from the officious guards patrolling the prison. During your bid for freedom, other prisoners would be seen to go about their everyday business, which all helped make the world feel more atmospheric. With its spiritual follow-up, *Where Time Stood Still*, Denton took these ideas and expanded on them brilliantly, this time plonking players inside a dangerous lost world and giving them a small party of characters, some with their own unique skills needed to complete the game, to guard and rescue.

Other notable isometric adventures also included Dusko Dimitrijevic's *M.O.V.I.E.*, a film noir game in which players assumed the role of a gumshoe trying to retrieve an incriminating audio tape from the mob. The game is notable for a neat mechanic whereby players could interrogate and converse with other characters in the game. This particularly came into play with two twin sisters: one proved helpful in the mission while the other was working for the mob, and it was up to you to work out which sister you could trust. Failure to be a good judge of non-playable character would see you led into a trap and sleeping with the fishes.

A lesser-known adventure title deserving of just as much praise was *La Abadía Del Crimen* (*The Abbey Of Crime*). Written by Spaniard Paco Menéndez and released only in Spain, it was a truly stunning isometric adventure based on Umberto Eco's famous book *The Name Of The Rose.* In the game, players were called to a monastery to solve a mystery surrounding the disappearance of a monk. With stunningly detailed visuals for the time, this spectacular and immersive whodunnit is an adventure game that fans of the genre should definitely seek out. If you're interested, the best way is to play the English-translated version for the MSX2, which can be found at **computeremuzone.com/abadia/abadeng.php**.

Arguably, though, the most polished example of the isometric adventure was System 3's *The Last Ninja* (1987). Mixing elements of puzzle-solving, glorious Technicolor, exploration and armed combat, its detailed graphics – on the C64, at least – deep control system, great oriental tunes, and cinematic story provided the complete package and blew away anything else seen on home computers at the time.

» [Mega Drive] EA's *Haunting* used isometric graphics to bring graphical realism to its mature themes.



"Knight Lore kicked open the floodgates, causing a wave of isometric titles"



So from a programming standpoint, what were the benefits of the isometric perspective and why was it so popular with many computer game developers in the Eighties? We put the question to Sandy White.

"It is simply a very convenient way to represent 3D when you have very little computing power," he answers. "I can sum it up in a single word: multiplies, as in x multiplied by y. Multiplies were time-consuming for your old 8-bit CPUs. I mean many, many times longer to calculate than adding or subtracting or shifting binary numbers, and you needed them to do 3D if you wanted perspective. Isometric equals convincing 3D with no perspective equals no multiplies equals fast on old 8-bitters! And because its angles fit nicely onto an array of square pixels, you could shove stuff around on screen using shifts and adds – cheap in 8-bit computing terms.

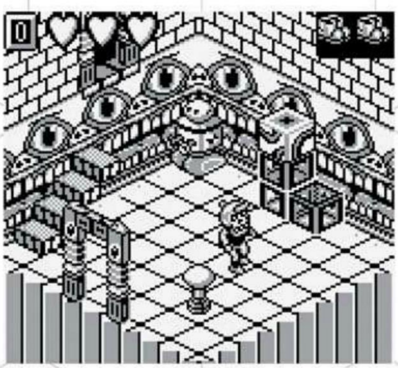
Sandy adds: "To put in perspective how unexpected the effect was at the time, at the press launch for *Ant Attack* there was an audible gasp from the assembled journalists when it first appeared on screen. I think I missed a trick, though: when asked by a reporter how to describe the graphics, I said 'isometric'. Bum! I remember him writing it down. I still fantasise that if I had just said 'Softsolid 3D', that would have gone into the lexicon instead, and I'd somehow be getting royalties"

» [PC] By the late Nineties, the isometric viewpoint had found a comfortable home on PC monitors, thanks to games like *Diablo* and *Fallout*.



Isometric Nineties

As game consoles began firmly replacing our beloved 8-bit micros so fewer isometric games started appearing on game shelves. This had nothing to do with the popularity or need of developers to utilise the perspective – even with the arrival of 16-bit consoles with powerful microprocessors, the viewpoint remained one of the very best methods to create detailed-looking 3D worlds on what was still fairly modest hardware – but rather the process of creating games had become more intricate and, in turn, development teams swelled and the volume of games produced began to fall. But while a console renaissance brought us some classic and memorable 2D titles, there were still a fair number of classic and inspired isometric titles too.





Where Time Stood Skew

We look back at some of the most notable 8-bit adventure games to see what it is they brought to axonometric tables

01. Ant Attack

- Released: 1983
- Publisher: Quicksilva
- Developer: Sandy White

Assuming the role of a faceless hero, Sandy White's seminal isometric smash saw players dropped into the blockish, bleak and giant-ant-riddled city of Antescher to find and escape with their lost love in tow. The first isometric game to allow players to go anywhere and explore an open 3D isometric world, *Ant Attack* changed the landscape of videogames.

02. Knight Lore

- Released: 1984
- Publisher: Ultimate Play The Game
- Developers: Tim and Chris Stamper

Ultimate's astounding *Sabre Wulf* sequel featured everyone's famous pith-helmeted adventurer on a quest to find the items needed to cure an acute case of lycanthropy. Set inside the exquisitely detailed walls of Knight Lore Castle, it is regarded as the 'true' progenitor of the isometric adventure genre, featured a number of objects to use, and has inspired countless other games and developers.

03. Fairlight

- Released: 1985
- Publisher: The Edge
- Developer: Bo Jangeborg

Fairlight, which comprises a series of two games, seems to get shamefully overlooked due to the impact of Ultimate's Filmation titles. But with its detailed visuals and stronger emphasis on realistic object manipulation, *Fairlight* can be seen as something really quite different from Ultimate's offerings. It's also one of the earliest examples of a mature take on isometric adventure games.

04. Night Shade

- Released: 1985
- Publisher: Ultimate Play The Game
- Developers: Tim and Chris Stamper

The enhanced power of Filmation II debuted in this game, *Night Shade*, and not only allowed for super-smooth scrolling of Filmation's detailed isometric graphics but also the power to make walls translucent. These features allowed Ultimate to construct more open worlds that featured outdoor sections and buildings to enter.

05. Batman

- Released: 1986
- Publisher: Ocean
- Developers: Jon Ritman, Bernie Drummond

Jon Ritman and Bernie Drummond's first collaborative project is probably most notable for being the first isometric 'adventure' game based on a licence, releasing in the same year as *Attack Of The Killer Tomatoes*. It may have featured a porky Caped Crusader and depicted the Batcave as some kind of bizarre house of horrors, but it's still a fantastic adventure game.

06. Pyracurse

- **Released:** 1986
- Publisher: Hewson Consultants
- Developers: Mark Goodall, Keith Prosser

Pyracurse was a smooth-scrolling isometric adventure game with an Aztec theme. Predating *Head Over Heels* and *Where Time Stood Still*, in *Pyracurse* players were assigned a party of four explorers, each with distinct attributes – Frozbie the dog, for example, could dig – and gameplay would involve switching control to make use of their individual skills.

07. M.O.V.I.E.

- Released: 1986
- Publisher: Ocean
- Developer: Dusko Dimitrijevic

M.O.V.I.E. saw you play the role of a private detective on the case of retrieving a sensitive tape from a mob hideout. As well as its non-fantasy setting helping set it apart from everything else, *M.O.V.I.E.* featured an innovative chat mechanic whereby a speech bubble would appear above your character's head, allowing you to fill it with commands using your keyboard and interact with characters in the game.

08. The Great Escape

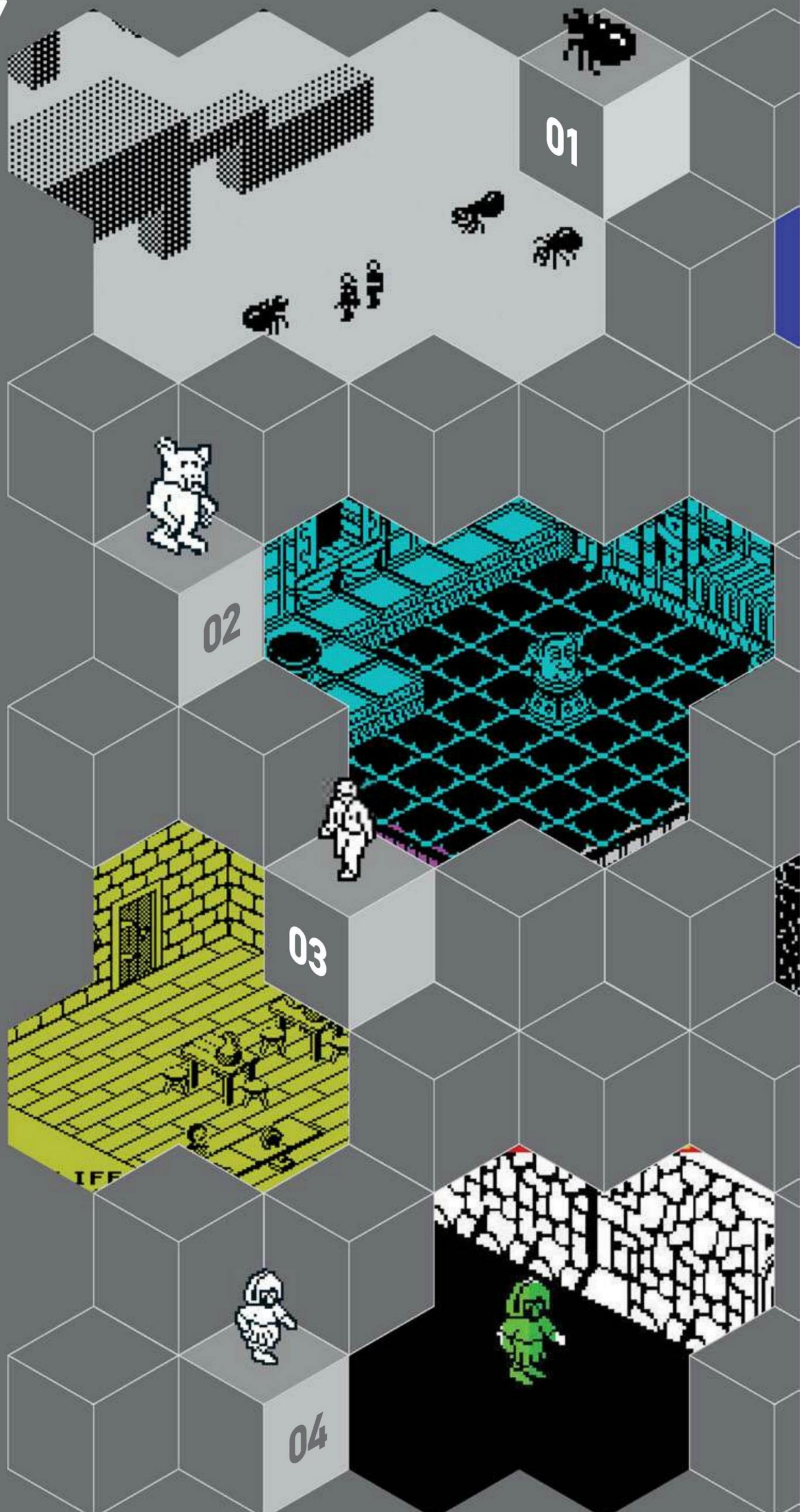
- Released: 1987
- Publisher: Ocean
- Developer: Denton Designs

Denton Designs' unofficial war movie tie-in tasked players with escaping from a German prisoner of war camp. Perpetually under the watchful glare of the prison guards, and with typical prison routines to abide by, it's *The Great Escape*'s innovative gameplay that sees it listed here. Although *M.O.V.I.E.* did pip it to the post in terms of featuring non-playable characters with a sense of personality, by instilling this level of detail into every facet of its world, few titles match *The Great Escape* for atmosphere.

09. The Last Ninja

- Released: 1987
- Publisher: System 3
- Developer: In-house

The Last Ninja series followed a typical tale of an aggrieved ninja on a globe-trotting mission to kill the person responsible for murdering his ninja mates. Selling over 2 million copies, the original game is one of the most successful C64 games of all time. It is proof of how popular 8-bit isometric adventures had become, and how impressive they looked with a splash of colour.





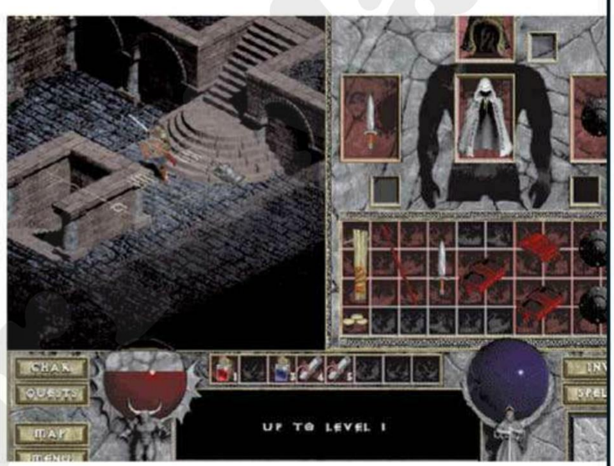
The Stamper brothers and Rare released a handful of classic isometric console games for the NES. The company's first was the seminal racer *RC Pro-Am*, which saw players steering remote-controlled cars around isometric racetracks. Rare's first big commercial hit for the console, *Pro-Am* inspired a number of isometric racers. Rare then followed this up with *Cobra Triangle* a year later, which switched the RC cars for speedboats and spiced up the racing with mission-based objectives; and the sublime *Snake Rattle 'N' Roll* in 1990. With gameplay that saw you helping snakes scoff their way to victory by unlocking exits with their weight, *Snake Rattle 'N' Roll* merged brilliantly the offbeat nature of games such as *Head Over Heels* with popular movement-based isometric action/puzzle titles like *Marble Madness* and Paul Shirley's *Spindizzy*.

During the 16-bit era, developers had continued to view the isometric perspective as a great means to construct detailed 3D worlds, and so it soon became used in adventure, RPG and strategy titles. From *Populous* to *Desert Strike*, *Little Big Adventure* to *Planescape: Torment*, *Command & Conquer* to *UFO: Enemy Unknown*, the isometric projection started to show its versatility by straddling various genres and demonstrating how, even after the Eighties, it was still being used to help create some of the most popular and classic videogames of all time.

With the arrival of fifth-generation CD-based consoles and their polygon-producing powers able to finally construct true 3D environments, most developers inevitably began moving away from isometric games. But the viewpoint's strengths – the ability to create detailed, packed-looking worlds and allow gamers to effortlessly view them – did keep it in work for a time thanks to popular PC game series such as *Civilization*, *The Sims* and *Diablo* although over time even these series have come to drop the forced perspective, instead opting for true 3D.

Looking today, the latest *Tomb Raider* outing, *Lara Croft And The Guardian Of Light*, is perhaps the biggest new release that can be seen utilising an isometric forced perspective – a nice irony when you consider that she was the pin-up for polygon-constructed game worlds in the mid to late Nineties. But while this excellent twin-stick shooter is proof that there's still life in the forced-perspective approach, it's plainly clear that there's no chance of it ever seeing a return to its past glory.

With a popular decade-long reign in the 3D spotlight since its emergence in 1982, though, the perspective, like sprites, has a distinct quality that helps games such as *Knight Lore* and *Head Over Heels* feel timeless, and, as we've discussed, has certainly given us some of the finest, most innovative and immersive game worlds in history.

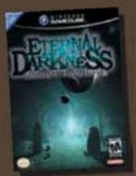


» [PC] *Diablo* was a massively important addition to the genre, and its influence is still felt today. Its isometric style was copied in many similar RPGs including *Baldur's Gate* and the more recent *Torchlight*.

Future Classic



Modern games you'll still b years to come





INFO

- **Featured System:** GameCube
- **Year Released:** 2002
- **Publisher:** Nintendo
- **Developer:** Silicon Knights
- **Key People:** Denis Dyack (Designer, writer) Ken McCulloch (Writer) Steve Henifin (Music)
- **Buy it for:** £6+

GO DEEPER

- **Actress Jennifer Hale features in *Metroid Prime 3*, *Killer7* and *Knights Of The Old Republic*.**
- **A promised spin-off TV show and film never materialised, but several short films were made.**

03. ETERNAL DARKNESS: SANITY'S REQUIEM

Planned for Nintendo's N64, and eventually released for the GameCube – find out why Silicon Knights' survival horror title was worth the wait

THE BACKGROUND

It's a brave developer that attempts to step into the survival horror genre, particularly when genre veterans Capcom have already announced several new reiterations of its popular *Resident Evil* series for the very same machine.

Denis Dyack and the rest of the team at Silicon Knights weren't scared of the competition in the slightest. The developer had been planning its creepy gothic love letter as far back as the N64 and was determined that it would break Capcom's stranglehold on the genre; something it briefly succeeded in doing, at least until the release of *Resident Evil 4*.

First showcased at 1999's E3 and scheduled for a Halloween release the following year, Silicon Knights' *Eternal Darkness* immediately set tongues wagging thanks to its impressive-looking fully 3D engine – which was a world away from the pre-rendered backdrops of the N64's *Resident Evil 2* – clever gameplay mechanics and rich narrative. Halloween quickly came and went, and when *Eternal Darkness* failed to appear the rumour mill ground into action, with a frenzied internet speculating that *Eternal Darkness* would move across to Nintendo's incoming Dolphin (as it was then known).

Those rumours were finally confirmed when Nintendo announced *Eternal Darkness* as one of the GameCube's big hitters, and it was eventually released in 2002, some three years after its original announcement. While not a spectacular seller for Nintendo – it notched up just shy of 300,000 units in the US in the three-year period after its release – it nevertheless garnered plenty of critical acclaim and remains a truly astonishing piece of work.

THE GAME

What impresses about *Eternal Darkness* is its sheer ambition. Silicon Knights had a story to tell and it used every trick in the book to ensure that its clever

Things of note



Beta frights
Eternal Darkness was a long time in development, spanning two consoles. If you are interested in seeing what the N64 version looked like, there are videos on YouTube. Just type in '*Eternal Darkness* Beta'.



Villain evolution
Few games allow you to play as your nemesis, but *Eternal Darkness* is one of them. Pious Augustus discovers a relic that transforms him into the antagonist that will haunt the player throughout the rest of the game.

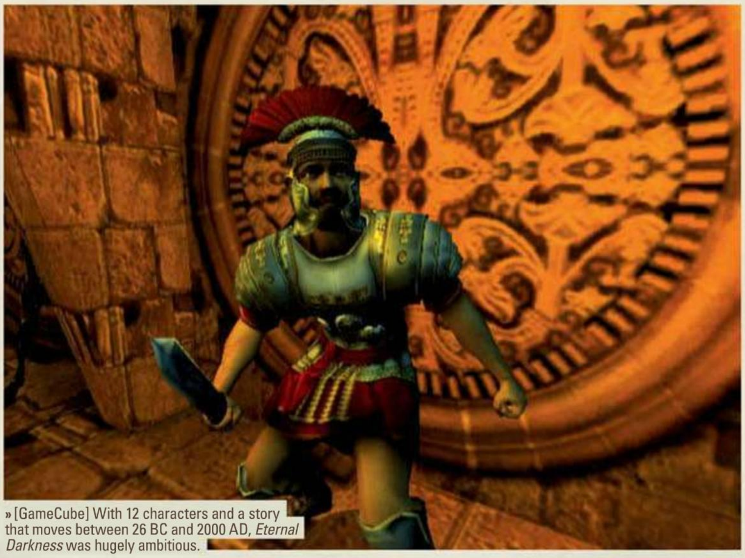
Award winner
Silicon Knights walked away with 'Outstanding Achievement in Character or Story Development' at the Interactive Achievement Awards. Other winners have included *ICO*, *Star Wars:KOTOR* and *BioShock*.



Grim and gruesome
Death is often and grisly in *Eternal Darkness*. As a result, it became the very first Nintendo-published game to receive a Mature rating in the states. It received a 15 certificate in the United Kingdom.



Team players
It's rare to see such a large cast of playable characters, and rarer still to see so many believable ones. *Eternal Darkness* managed where so many others had failed. It remains one of the game's most satisfying aspects.



» [GameCube] With 12 characters and a story that moves between 26 BC and 2000 AD, *Eternal Darkness* was hugely ambitious.





» [GameCube] As recently as 2008, Denis Dyack suggested that we could see an *Eternal Darkness* sequel in the future.

What the press thought

Cube
Score: 9.3/10
"*Eternal Darkness* is a sensational game… a startling, epic, two-millennia-long, exquisitely crafted, headf*ck."



Gamestyle
Score: 9/10
"Another essential purchase for Cube owners, with many delights, shocks and thrills in its 20-hour running time."

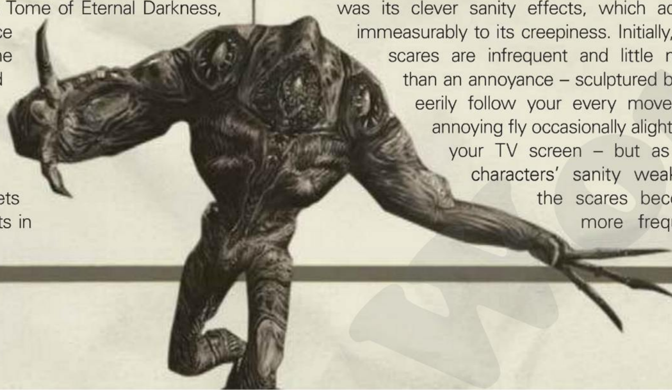
message came across. A tale spanning two millennia and featuring 12 playable characters sounds like a recipe for disaster, but Silicon Knights handles its Lovecraftian script with amazing assuredness. Denis Dyack has often stated in interviews that the story is always the most important dynamic when Silicon Knights is creating new games, and it's easy to see in *Eternal Darkness*.

Although many of the characters are only available for a single chapter, each and every one of them is just as fully fleshed out as lead Alexandra Roivas, a Buffy Summers wannabe whose present-day setting not only acts as a central hub, but ties all the other chapters together. Searching her Grandfather's huge mansion after discovering his grisly death, she slowly discovers pages of The Tome of Eternal Darkness, which in turn introduce you to the rest of the game's characters. And what a motley bunch they are.

Pious Augustus is a Roman Centurion whose grim discovery sets the game's future events in motion, Karim is a Persian swordsman uncannily similar to a certain Prince, Dr Edwin Lindsey is an Indiana Jones-style archaeologist, and Michael Edwards is a Canadian firefighter. All are wonderfully realised and each one has a part to play. The fact that Silicon Knights isn't afraid to kill a number of them off in order to enhance the story just makes their limited screen time that much more believable.

Another clever touch is the way Silicon Knights revisits the same areas in different time periods. While you'll find yourself returning to the same locations, their structure is often completely different, with the erosion of time making a huge difference to the overall makeup of each stage.

For many gamers, the real draw of *Eternal Darkness* was its clever sanity effects, which added immeasurably to its creepiness. Initially, the scares are infrequent and little more than an annoyance – sculptured busts eerily follow your every move, an annoying fly occasionally alights on your TV screen – but as the characters' sanity weakens the scares become more frequent and sinister. You lose all control of your character, only to see them ripped apart in front of your disbelieving eyes; the TV seemingly switches itself to another channel; an apparent error sees your hard-earned save deleted. It's a truly ingenious idea, as rather than annoy, the effects just pull you in further due to all the time that you've invested into your dark journey.



WHY IT'S A FUTURE CLASSIC
Although it was superseded by Capcom's *Resident Evil 4*, Silicon Knights' wonderfully creepy title holds up extremely well, and is arguably a different beast to Capcom's franchise. *Eternal Darkness* is all about the story and atmosphere. It succeeds in creating an incredibly immersive world, thanks in no small part to the effort Silicon Knights invested to make it as historically accurate as possible (with the odd artistic concession here and there). While there are large, lumbering beasts to destroy and obstacles to overcome, it's the psychological horrors that are the most effective aspect of this macabre masterpiece. There aren't many videogames that have you holding the controller with sweaty palms while your heart pounds frantically in your throat; but *Eternal Darkness* is one of them. And we love it for it.



ATTACK OF THE CLONES

Retro Gamer reveals the many great games that were based on classic arcade hits

It's always risky to make sweeping generalisations about your audience, but with this being Retro Gamer and everything we're going to go out on a limb and say that most of us were lured into the magical world of videogaming via the neon lights and sticky carpets of the amusement arcade. And the reason we bought the home computers we recall so fondly in these pages was primarily because we wanted to replicate something of that atmosphere in our own homes, without choking on cigarette smoke or falling foul of the drug dealers, sex criminals and murderers who were widely held by the media and our parents to inhabit such places. And also without having to buy an Atari VCS, whose games sold for what now equates to something like £80 each.

The fledgling games industry was a strange blend of innocence and lawless frontier spirit back in those days, though, and the idea of obtaining an official licence from copyright holders to reproduce their coin-op properties was as alien as, well, an invader from space. So for the first few years of the home computer boom, what we got instead was the attack of the clones, a lawless wilderness where copyright didn't matter.

INVADERS 64
■ (1984, Livewire for C64)

We start at what, for most people, was the beginning, and immediately encounter one of the oddest things about the history of 8-bit computing – the bizarre fact that there was never a really good copy of *Space Invaders* available on any home computer released in the UK.

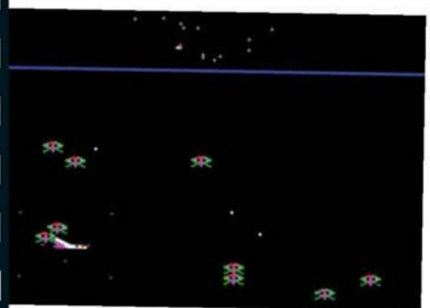
It's odd because *Space Invaders* offers far fewer challenges to the unofficial cloner than most coin-ops of the time. Its graphics were essentially monochrome so even the Spectrum should have been able to manage something that looked very close to the original, it wasn't exactly lightning fast, and it was basically a single screen over and over again. In fact, those are probably the reasons nobody bothered doing it properly – even in the early Eighties, *Space Invaders* was already thought of as old hat and boring.

Livewire's C64 clone, though, is about as close as anyone got. It looks and plays pretty much like the arcade game and is only really let down by the absurd sound effect for firing, which is more akin to a particularly unpleasant outbreak of explosive diarrhoea than a laser gun.









PLANETOID
■ (1982, Acornsoft for BBC Micro)

Conversely, *Defender* should have been a much harder job. Fast, scrolling, complicated controls, packed with action and reliant for much of its appeal on what were, for the time, spectacular effects, it asked a lot more of the creaky CPUs of 8-bit machines than *Space Invaders*. Yet almost every format had at least one great *Defender* clone, from *Guardian* on the C64 to *Starblitz* on the Spectrum, and the most legendary of all is unquestionably Acornsoft's mighty *Planetoid*, which, indeed, was originally released under the name *Defender*, until some primitive copyright lawyers got involved.

Visually almost indistinguishable from the real thing – at a glance, anyway – and every bit as ferociously demanding, *Planetoid* set a high watermark for arcade conversions that Acornsoft would spend years trying to live up to.

"The idea of obtaining an official licence to reproduce coin-op properties was as alien as a space invader"





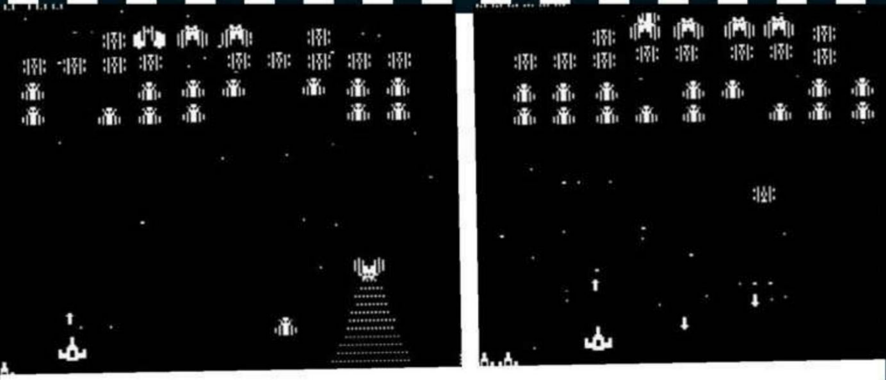
PHEENIX
■ (1983, Megadodo for Spectrum)

EAGLE EMPIRE
■ (1984, Alligata for C64)

Centuri's 1980 coin-op *Phoenix* is celebrated for a number of reasons, including being one of the first games to feature multiple different types of attack wave and the first to feature a boss stage. All of its features were replicated superbly in 8-bit ports, but sadly not all in the same one.

Eagle Empire looks like a star candidate, with a near-flawless rendition of the arcade visuals – right down to the funny limb-waggling 'walk' of your spaceship – and a very convincing stab at the gameplay, but then blows it at the vital moment with a dismally weak attempt at the famous mothership stage. *Pheenix*, meanwhile, can't capture the look of the game quite as well with the Speccy's restricted palette, but matches *Eagle Empire* for gameplay in the first four rounds then delivers a boss stage that's much closer to the proper one. Splice *Pheenix*'s gameplay into *Eagle Empire*'s graphics and you'd have the perfect *Phoenix* clone.

ATTACK OF THE CLONES



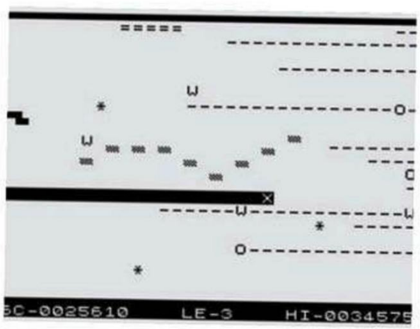
GALAGON

■ (1984, Microdeal for Dragon 32)

Namco's iconic *Galaxian* was one of the most-imitated games of the early years of home micros, but as with *Space Invaders* nobody ever really nailed it. Acornsoft's BBC version, *Arcadians*, is the most acclaimed unofficial clone, and while it gets most things right, its jerky attacks rob it of the sweeping, curving elegance that was *Galaxian*'s hallmark. The sequel, *Galaga*, though, fared a bit better.

The most fondly recalled version is probably Nick 'Orlando' Pelling's homage on the BBC Micro, the lovely looking *Zalaga*, but played nowadays it's insanely fast and unfair. The most faithful translation, though not the prettiest nor most colourful, is Microdeal's excellent Dragon knockoff, *Galagon*. We'll be hearing more of the Cornwall-based publisher in this feature, and *Galagon* is typical of its diligent and painstaking work, replicating the arcade game almost perfectly, if a little slowly. Despite being a tad sluggish, though, it feels just like the original, which is much more important.

"Try to work out what Caterpilla, Hopper, Cosmic Intruders and Monster Muncher were ripping off"

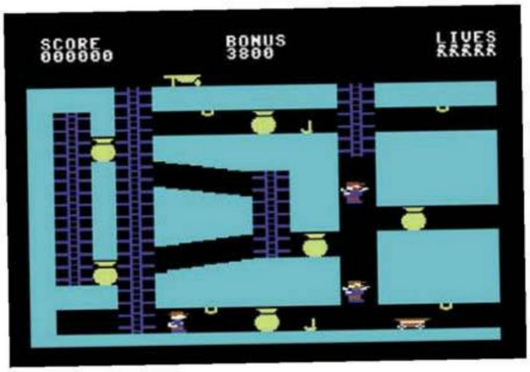


TEMPEST

■ (1981, Mikro-Gen for ZX81)

And if we're talking about feel as the most important consideration in a coin-op clone, we can't pass by without giving another mention to one of the most impressive achievements in British videogame coding history.

We've written about SP Kelly's incredible ZX81 version of Atari's majestic *Tempest* before, but it really is an astounding feat – taking a colour, vector graphics arcade machine with pseudo-3D graphics and a dedicated dial controller and transferring it to a silent, monochrome home computer with a resolution of 32 by 22 pixels and a flat rubber touch keyboard, yet somehow managing to capture the essence of the game completely and create something that's still enormously playable 30 years later. We make no apologies for covering it again, because if you care even the tiniest bit about videogames you need to see this and marvel at its brilliance.

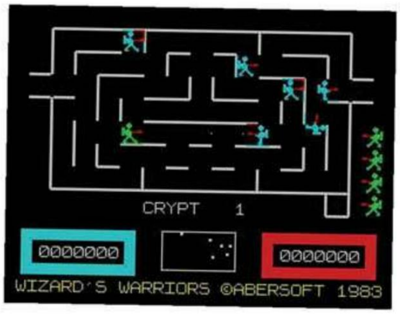


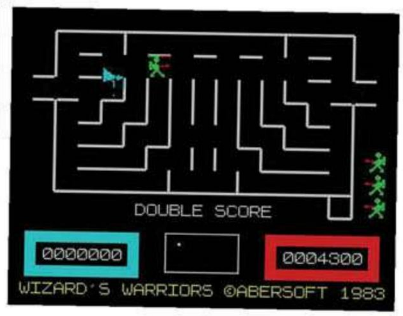
GILLIGAN'S GOLD

■ (1984, Ocean for C64/Spectrum)

Manchester behemoth Ocean would go on to become the biggest publisher in the 8-bit world, as well as the number one acquirer of legitimate licences – whether for games, movies, rock bands or other properties – but in its early days the company was a non-stop production line for unofficial arcade clones. Many were obvious – see if you can work out which games *Caterpilla*, *Hopper*, *Cosmic Intruders* and *Monster Muncher* were ripping off – but Ocean also specialised in quietly copying obscure titles that most people in the UK had never heard of, the most notable of which was *Gilligan's Gold*.

Based on Stern's 1982 mining game *Bagman*, *Gilligan's Gold* is actually one of the most impressively accurate conversion jobs of the era. Even on the Spectrum it looked very much like its arcade counterpart, despite being in landscape orientation when the coin-op was in portrait, and played almost identically. Indeed, it even ramped the speed up a little and added continuous music, which Stern's version lacked, while maintaining the arcade game's fearsome difficulty. Rarely given the credit it deserves – possibly because half the people who played it never got off the first screen – *Gilligan's Gold* is right at the zenith of the unofficial cloner's art.





THE WIZARD'S WARRIORS

■ (1983, Abersoft for Spectrum)

Some little-known coin-ops, meanwhile, lived at both ends of the conversion scale. On certain formats they got full official ports, whereas on others they were ignored by licence owners and knockoff merchants alike. *The Wizard's Warriors* is the only unofficial version of Midway's 1980 dungeon battler *Wizard Of Wor* that we know of for any home micro, which is a shame as it's a great game – like a super-intense, faster and more claustrophobic version of *Berzerk* – that deserves to be better remembered. The Speccy version replaces all the different monsters with clone soldiers, making it much less wizardy in the process, but otherwise it's a great translation with a loving eye for the original's details, even though most of its players wouldn't have known the difference.



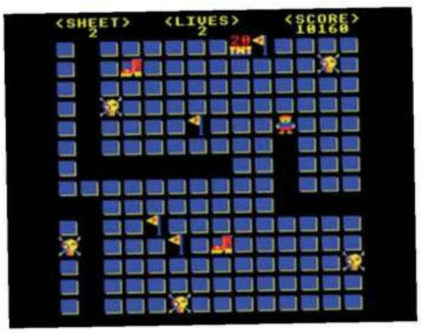


DALEY THOMPSON'S DECATHLON

■ (1984, Ocean for C64/Spectrum)

On the subject of the best of the unofficial clones, we should stop and award a medal to one of the first games that showed how home ports could be substantially better than the arcade titles they were copying. Konami's 1983 *Track & Field* was a landmark athletics game with six events, but *Decathlon* was a respectable facsimile of it that managed to extend that number to ten.

The Speccy version looked a lot more like the coin-op and allowed for button controls – weirdly, the C64 version didn't, insisting on having you destroy your joystick even though *Track & Field* was always a button-controlled game and the C64 had plenty of buttons – but it infamously turned Daley Thompson white and robbed him of his trademark 'tache. The C64, on the other hand, wasn't split into what amounted to two separately loaded pentathlons, and authentically let you have two players at once in the race events. In such ways do format wars really kick off.



DANGER UXB

■ (1983, Micro Power for BBC Micro)

Another pretty obscure game, but one that, unlike *Bagman* and *Wizard Of Wor*, seemed to get a disproportionate amount of attention from early Eighties coders, was Zilec-Zenitone's quirky bomb-defusing coin-op *Checkman*. Perhaps due to its simple, block-based gameplay, the game was the subject of many pretty good home replicas, including *Timebomb* on the Speccy and *Gridtrap* on the C64. The best, though, was Micro Power's BBC effort, which did a great job of maintaining the arcade game's speed and even found time to sneak in a little bonus mini-game between rounds where *Checkman* only had a cut-scene.

If anything, in fact, *Danger UXB* starts off even faster than its inspiration, and even finds time to add a beginner mode where it's just you and the bombs against the clock, without the troublesome stomping Dr Martens that chase you around. It's one thing to make a decent clone, but actually improving the source material a little along the way is fine work indeed.

SPACE PILOT

■ (1983, Anirog for C64)

***Space Pilot* is** a game with all sorts of personal resonances for us. For one, the coin-op it's based on, Konami's *Time Pilot*, brings back memories of racking up 2,007,700 points in an arcade in Falkirk, missing three trains home in the process, only to fail to get on the high-score table. And secondly, it was one of the few games whose magazine ads could make a Speccy owner jealously wish that they had a C64.

The Speccy didn't have any *Time Pilot* clones at all, far less one this good. Anirog's knockoff is amazingly close to the experience of the coin-op, and all the more impressive for capturing it without the benefit of the original's unique joystick, which had no centre position. It handles the omni-directional scrolling and the large number of sprites superbly, with only minor occasional slowdown, and it looks and feels just like playing *Time Pilot* in your own home.



WRONG KONG PONG SONG

Well, okay, there's no song. But these strong contenders for worst arcade clone ever sure are lamentable. We're not quite sure why *Donkey Kong* was done so badly so often – it's not the most complex game – but for some reason even the worst coin-op copies never seem to plumb the depths as badly as a really terrible *Kong*.



Krazy Kong
(1983, PSS, Spectrum)

Kong looks more like a ninja in a gimp suit and the jump animation is something to behold. The least dreadful of the five games in this list, so if you're in a hurry just play this one and marvel at how mind-numbingly appalling the others must be.



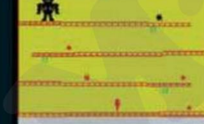
Killer Kong
(1983, Blaby, Spectrum)

We had to take a screenshot of the Game Over screen for this, because *Killer Kong* flickers so badly that you can't get one of the barrels if they're moving. You don't even get a running jump – it's straight up and down or nothing. Absolutely dire.



Kong
(1983, Anirog, Spectrum)

A game where two barrels moving the same way can fall down from the same girder then roll off in opposite directions. Good luck with that!



Krazy Kong
(1982, C-Tech, Spectrum)

We remember the flood of angry letters to *CVG* about this. Our favourite bit is the interactive loading, where you have to manually switch Caps Lock on halfway through – if you don't, the game won't start – and the impressively bad controls.



Wally Kong
(1984, Walltone, Spectrum)

On choosing a level, you always seem to start on the same one. And *Wally Kong* manages to get worse after that – we especially love not being able to jump straight up, and the inability to jump at all if you're within three squares of a ladder.

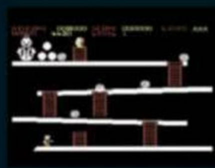
ATTACK OF THE CLONES

OCEAN'S ROAD TO RESPECTABILITY



1. Road Frog
(Spectrum, 1983)

This crude *Frogger* rip-off contented itself with brazenly stealing the concept and style of a single game. Not even an attempt to hide its 'inspiration'.



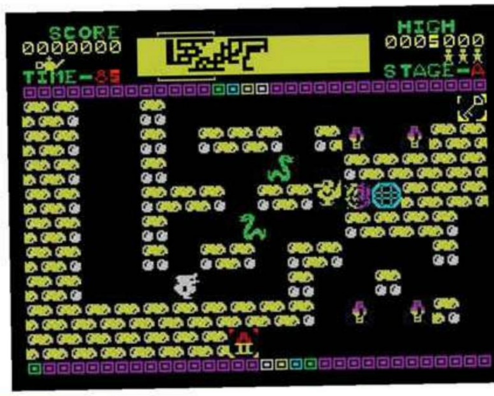
2. Eskimo Eddie
(C64, 1983)

Two muggings for the price of one in this example, as the *Pengo* clone of the main game is preceded by a single-stage *Donkey Kong* level.



3. Kong
(Spectrum, 1983)

A further increase in boldness, now going so far as to steal part of the name of its victim, as well as cloning its classic gameplay amazingly poorly.



QUACKSHOT
■ (1985, Creative Sparks for Spectrum)

As IP owners tried to crack down on unofficial ports, some coders took a different approach to cloning. Rather than openly copying a game and giving it a name that was often only a single letter removed from that of the source material (*Pheenix*, *Galaxion*, etc), they'd swipe the game but give it a whole new 'skin' in the hopes that such a change would be enough to escape the lawyers' clutches.

For example, the Speccy's leading 'tribute' to Konami's 1982 tomb-raiding hit *Tutankham* had previously been Micromania's unsubtly titled *Tutankhamun*, but the wiser heads at Creative Sparks switched the setting from the resting place of the mummified Egyptian king to a clockwork toy factory full of wind-up ducks, while duplicating the actual gameplay slavishly. Oddly enough, despite the new storyline, *Quackshot* both played and looked far more like *Tutankham* than *Tutankhamun* had, copying the arcade game's level layouts almost to the last brick.



KOSMIC KANGA
■ (1984, Micromania for Spectrum/C64)

Micromania, meanwhile, had already cottoned on to this angle itself. Unknown to most gamers at the time – the *Crash* review described it as "entirely novel" and "totally original", while poor old *Big K* went with "following a handful of passable arcade conversions they've produced their own original game" – this strange skyscraper-leaping platformer was pretty much a direct copy of Rock-Ola's 1981 arcade release *Jump Bug*, except with that game's VW Beetle replaced with a giant kangaroo in a space helmet and boxing gloves. A bouncing kangaroo does make more sense than a bouncing car, to be honest.

To be fair, *Kosmic Kanga* is reasonably different to *Jump Bug* in practice, if not in design. While a list of features for the two games would be all but indistinguishable from each other, trying to play them the same way will swiftly land you in trouble, thanks to distinct layouts and the controls working slightly differently. But still, it looks like you can fool all of the people, but only for a couple of decades.

3D STARSTRIKE
■ (1984, Realtime Games for Spectrum)

***3D Starstrike* actually** does something very much like *Kosmic Kanga*, albeit in some senses in the opposite way. Realtime never tried to hide the fact that it was aping Atari's hugely successful *Star Wars* coin-op, but the game it produced, while inarguably developed from the same blueprint as Atari's game, had a feel just different enough to be plausibly claimed as a tribute rather than a photocopy.

It's not an argument that can stand up to a huge amount of cross-examination, admittedly. The necessity of translating the coin-op's yoke controller to a keyboard is the mother of the distinctive steering technique, and the addition of a temperature gauge to your lasers is really just as much window-dressing as the little between-wave briefing cut-scenes. But still, *Starstrike* does feel noticeably grittier and more adult than *Star Wars*, and would probably have got away with it in court.





GYROSCOPE
■ (1985, Melbourne House for C64/Spectrum)

Extrapolating the thought processes behind *Kosmic Kanga* and *Starstrike* to a logical conclusion leads to a yet cleverer angle, namely to make a game that's actually only like a coin-op in a couple of very superficial ways, yet which will immediately be recognised and seized on by fans of it. Such was the flash of inspiration that came to Melbourne House in 1985, while gamers were still dazzled by Atari's trackball-controlled arcade wonder from the previous year, *Marble Madness*.

Gyroscope strips out almost every gameplay element from *Marble Madness*, leaving practically nothing but the bare landscape, yet punters still hungrily devoured its evocative and unique atmosphere, which Melbourne had rightly recognised as being far more central to the game's success than any particular play feature. Indeed, the Speccy and CBM versions of *Gyroscope* were little alike, with very different level layouts and enemies, but both felt like *Marble Madness* and that was what counted.



4. Kong Strikes Back

(C64/Spectrum, 1984)

The height of robbery, still taking the name of *Donkey Kong* but using it on a cheap knockoff of arcade title *Mr Do's Wild Ride*.



5. Mr Wimpy

(C64/Spectrum, 1984)

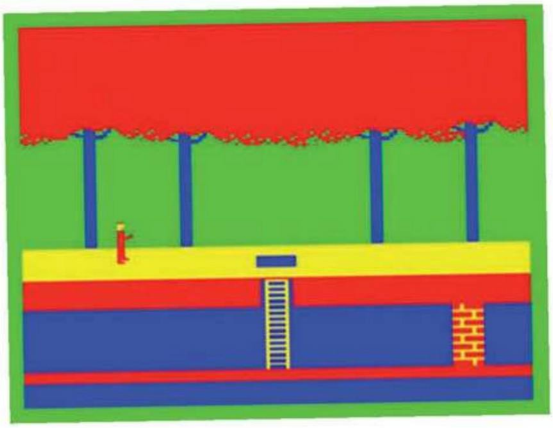
The first tentative move towards propriety. The game is still stolen, on this occasion from *Burger Time*, but at least the branding is legit.



6. Hunchback

(C64/Spectrum, 1984)

Ocean did a splendid job of bringing Quasimodo home, possibly because Century Electronics was supervising, and never looked back.

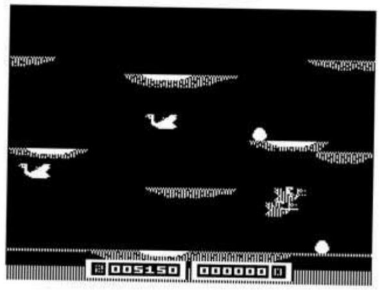


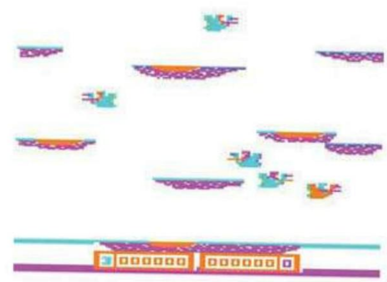
CUTHBERT IN THE JUNGLE

■ (1984, Microdeal for Dragon 32/C64)

Cheekier yet, of course, is to pinch a whole clutch of other people's games and brand them as your own series, turning them into a mascot for your own company and/or platform at the same time. Microdeal had already appropriated *Space Panic* (*Cuthbert Goes Digging*) and *Amidar* (*Cuthbert Goes Walkabout*) for the Dragon when it pulled off their most blatant steal yet, copying Activision's Atari VCS smash *Pitfall!* wholesale for Cuthbert's latest escapade.

It even had the nerve to port several *Cuthbert* games to the C64, where an official version of *Pitfall!* released in the same year had to fight for attention against the would-be usurper.





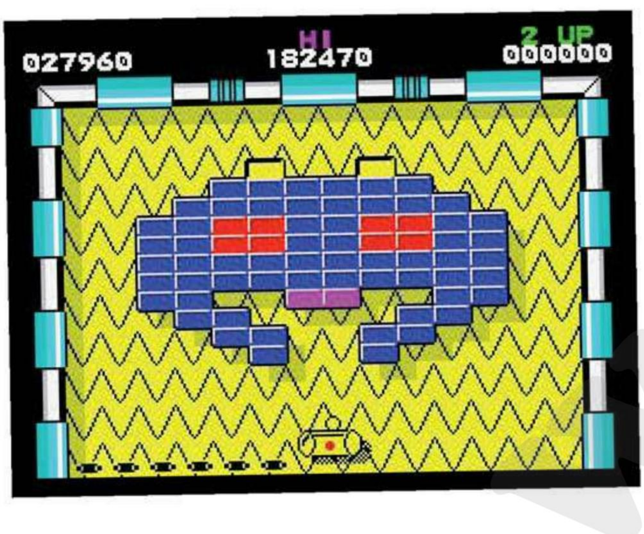
BUZZARD BAIT

■ (1984, Microdeal for Dragon 32)

Microdeal had one final bravura display of brass neck later the same year. *Buzzard Bait* was a superb copy of Williams' *Joust*, and the publisher was so proud of how well it had nicked someone else's game that it released it at twice the usual price, the increase being to pay for the security dongle that came with the cassette and plugged into the second joystick port, without which the game wouldn't run.

It takes some ice-cold nerves to huffily occupy the moral high ground over pirates doing to you what you're busily and flagrantly doing to someone else at the same time – the casual pirates weren't making money off it, either – and the dongle episode was not popular. After *Buzzard Bait*, the company moved away from arcade clones and started to focus on more original games like the marvellous *Time Bandit*, which was unmistakably inspired by *Tutankham* but built massively on it to produce one of the finest games **Retro Gamer** has never covered. Cough, cough.

"It takes nerves to take the moral high ground over pirates doing to you what you're doing to someone else"



WIPE OUT

■ (1987, KB.RAM for Spectrum)

As the industry matured and publishers started protecting their IP – or, in the case of *Buzzard Bait*, other peoples' IP – more determinedly, some developers hurriedly backed away from their more blatant clones. One such victim was *Wipe Out*, which never got an official commercial release in its original form. It eventually morphed into the game better known as *Batty*, which debuted on a *Your Sinclair* cover tape and subsequently got a budget-label release, but the first version was a much more direct rip-off of Taito's seminal 1986 *Breakout* update *Arkanoid*, with level designs as close to the coin-op as the Speccy's resolution would allow.

Equipped with a new set of original levels and various gameplay tweaks, *Batty* went on to become a beloved Speccy stalwart and also got a radically different C64 conversion. By this time, however, official licences were already dominating the charts, and the attack of the clones was staggering, its forces decimated, towards its inevitable defeat.

THE UNCONVERTED

Arcade games that never made it home





IN DEPTH

» One of *64th Street*'s 'things' was that it was possible for players to throw enemies at the back walls of the stage to create real-time damage or to remove them completely.

» The game features some impressively cheap bosses that all get recycled later on. This, of course, just makes them doubly cheap.

» We're no David Starkey, but the fashions and enemies in the game seem wildly out of place. Orange jeans and a purple shirt with matching purple shoes? Was purple even around in the Thirties?

64TH STREET: A DETECTIVE STORY

■ **Developer:** Jaleco ■ **Year:** 1991 ■ **Genre:** Beat-'em-up

■ **As side-scrolling fighters became popular, some developers tried to differentiate theirs and attract players by setting them in all kinds of weird scenarios. Last month we took a look at *Night Slashers*, a side-scrolling brawler by Data East with a schlock horror theme. This month it's Jaleco's *64th Street*, a fighting game with an interesting gumshoeing-meets-steampunk premise. Next month we'll attempt to find a game that mixes dentistry with Jeet Kune Do.**

64th Street's plot finds two chalk-and-cheese detectives – Rick, an experienced private eye with the head of Freddie Mercury and the dress sense of Timmy Mallett; and his younger, cooler partner Allen – who are on the case to rescue the kidnapped daughter of a 'rich man'.

After a ridiculous preamble cinematic that shows Allen discovering that the criminals responsible for the kidnapping have been using coded classified adverts in newspapers as a convoluted means to communicate with one another, the pair jump into action, embarking on a mission that sees them fighting crooks on the mean streets, inside a moving bus, and inside a mob building of operations, before the case is closed following a climactic fight inside a zeppelin.

While *64th Street* dares to do something a little inventive with its detective theme, sadly the game is pretty forgettable. The combat is solid enough, especially thanks to the novel ability to toss enemies at the walls to damage the level, but the gameplay becomes monotonous fairly quickly.

The enemies, for instance, are all stereotypical beat-'em-up fodder, comprising a mix of Eighties thugs in bombastic outfits and your typical oddballs such as wrestlers, hunched men with Freddy Krueger gloves, and ninjas, all of which feel wildly out of place in the Thirties era that the game tells us it's set in. The bosses are strange too: a goofy pirate, a giant man wearing evening wear, a pool shark, and something that looks like Robin Williams in *Bicentennial Man*. The detective theme is also squandered, limited to pick-ups in the form of books, pipes and pens.

Given the popularity of the genre, it is strange that *64th Street* was never brought home. Having said that, it heavily influenced Jaleco's *Rushing Beat* trilogy, which appeared on the SNES.



CONVERTED ALTERNATIVE

FINAL FIGHT 1989

64th Street's closest contemporary is certainly *Rushing Beat* (*Rival Turf* in the West), but as that game didn't originate in arcades we have therefore opted for *Final Fight* instead. Jaleco was clearly trying to put its own spin on Capcom's seminal smash.

4-D WARRIORS

■ **Developer:** Coreland ■ **Year:** 1985 ■ **Genre:** Shoot-'em-up



» [Arcade] The beauty of writing this feature is that occasionally you find a lost gem, such as *4-D Warriors*.

■ **This unconverted title** from early Banpresto (Coreland at the time of the game's release) is a decent side-scrolling jetpack shoot-'em-up, similar to Capcom's *Section Z* and *Forgotten Worlds*.

4-D Warriors finds players taking on the role of a robot frozen in a permanent Michael Jackson pose that has the ability to hop between two different dimensions – hence the '4-D' in the title.

Though it sounds ambitious, the gameplay is actually pretty simple, with the dimension-hopping used subtly. Each stage is linear and finds you blasting away a series of hideous aliens by switching them between the two dimensions: a red zone with zero gravity, and a blue zone that will slowly pull your player towards terra firma. As you hunt your target through these two spaces, which you switch to by simply hopping over the playing field, you must also vanquish a continual wave of enemy forces.

Though the weapon system does feel like an afterthought, with you blasting gems to access some clumsy-feeling ammo types that are annoying to aim, the action in *4-D Warriors* keeps a decent pace, and there are some imaginative-looking enemies and bosses too.

That it never received home ports surprises us, as we think it's a great little underrated shmup gem.

CONVERTED ALTERNATIVE

SECTION Z 1985

In terms of similarity we opted for *Section Z*, which is another jetpack blaster released in the same year. However, the game was only ever ported to the NES and the Famicom Disk System, and this version differs considerably to its arcade parent.



CONVERTED ALTERNATIVE

MOON PATROL 1982

We struggled to think of an alternative to *Pioneer Balloon*, until we discovered *Horizon* and realised that it shares quite a lot with *Moon Patrol*. The action is simply flipped: you're trying to negotiate hazardous terrain destroying air and occasional ground targets.



PIONEER BALLOON

■ **Developer:** SNK ■ **Year:** 1982 ■ **Genre:** Shoot-'em-up



» [Arcade] We'd love to know how SNK came up with this idea.

■ **There are very** few games in history that have seen gamers steer a hot air balloon. In fact, we're struggling to name two. One we can do easily, though, thanks to us discovering *Pioneer Balloon*.

Given the game's unusual premise, initially we assumed that it was loosely inspired by the memoirs of Phileas Fogg. However, after reading them, we were shocked to discover only a cursory mention of ballooning in the text.

Well, in actual fact, as its title hints, *Pioneer Balloon* is an early forced-scrolling horizontal shooter from SNK that finds you steering a giant balloon above some hostile terrain in pioneer era America. Full of annoying things that want to pop you out of the sky, including stagecoaches, gorillas, birds and even tornados, your mission is to survive the aerial gauntlet, retaliate by lobbing things that look like proximity mines, and reach the solace of a fort situated at the end of each stage.

With enemy projectiles launched at an almost unavoidable rate and the game having no restart points, at first *Pioneer Balloon* can feel frustratingly challenging. However, do stick with it. With a bit of perseverance we quickly found ourselves becoming better at dodging attacks, edging further in with every replay and finding the game really quite enjoyable.

BEST LEFT IN THE ARCADE

HORIZON

■ **Developer:** Irem ■ **Year:** 1985 ■ **Genre:** Shoot-'em-up

■ **If you're anything** like us, your initial reaction to *Horizon*, a spiritual sequel to *Moon Patrol*, will be one of delight, as you see the game's interesting use of sprite-scaling in action. It sees you manning an armed space rover between three different lanes on the surface of a hostile planet, hopping between the different layers, destroying and evading enemies that fly and drive into view.

Sadly, though, despite getting quite frenetic and challenging at times, the game itself isn't that exciting. Aesthetically it looks bland, and levels seem to go on far too long. You have four 'operations' to complete, and each is divided into six sections. Along the way you get to pick up the most boring power-ups, and when you reach the next operation there seems to be little variety in the look of the enemies.

Horizon is an interesting idea that hasn't been utilised as well as it could have been, but if you're a big fan of *Moon Patrol* you'll probably enjoy it more than most.





In the chair with...

SID MEIER

Co-founder of MicroProse and Firaxis Games, Sid Meier is not only the man responsible for games such as Pirates! and Railroad Tycoon, but also possibly the only sane human being who can look you in the eye and tell you that he created Civilization. Cole Machin talks with him about his amazing career

SID MEIER IS a difficult man to pigeonhole. Over the years, his name has been attached to real-time strategy, military and business simulations, adventures, and even an interactive music design program. He's founded two companies and created enduring franchises, and, in doing so, has managed to achieve a level of videogame stardom that few developers have been able to enjoy. With such a varied and influential career, it was impossible to turn down the opportunity to learn a little bit more about how he got started and just where his career may be going from here.

RETRO GAMER: Could you tell us a little bit about how you originally came to be interested in videogaming?

SID MEIER: I've always enjoyed games and as a kid I played everything from toy soldier games, to board games, to card games. It was in college when I discovered computers, and I thought to myself that it would be amazing to someday play games on them. That motivated me to learn some solid programming skills while I was still attending college, and that's where I started making small games just for fun.

RG: Was there any specific game that really inspired you to begin development of your own? If so, what did you feel was so inspiring?

SM: In the late Seventies, Bill Stealey [former MicroProse partner] and I were working together at a company in Maryland, and one day while we were attending a business conference we decided to play a flight sim arcade game during one of the breaks. Bill was really impressed that I kept winning, and I told him that I could tell what the AI was going to do each time, so it was easy for me to win. Then I said that I could make a better game in two weeks. Bill challenged me to do just that and so began our game development company. We started MicroProse Software in 1980.

RG: Prior to the founding of MicroProse, had you already been working in the gaming industry? If so, in what capacity? How did you come into the job and what are your feelings about it?

SM: My first job out of college was as a programmer at General Instrument in Hunt Valley, Maryland, which is where I met Bill Stealey. It was a dream come true to start MicroProse and to make videogames for a living. I still feel it's the best job in the world, and every day I'm thankful that I get to make games.

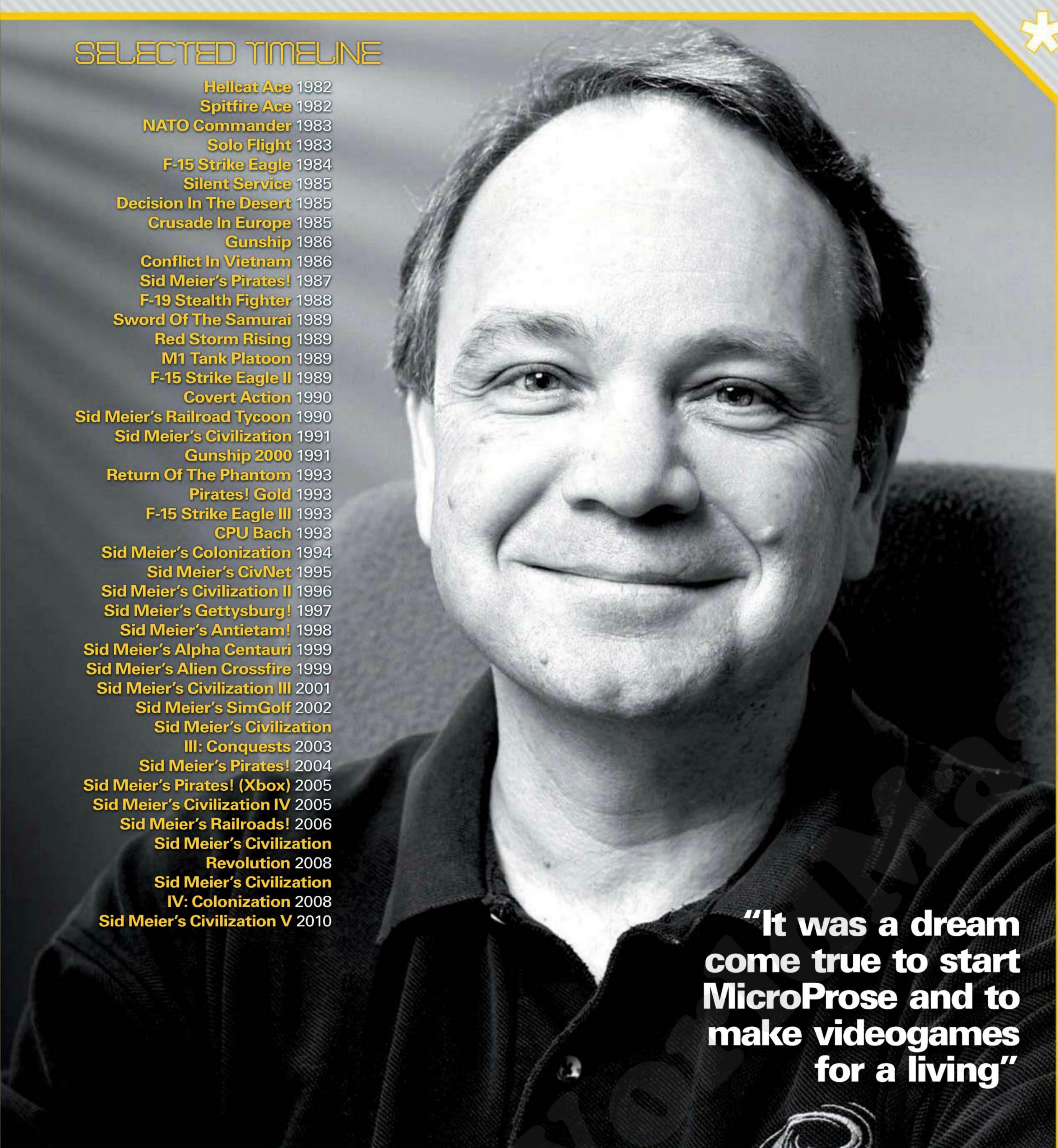
RG: Can you tell us about the founding of MicroProse?

SM: In the very early days of MicroProse it was just the two of us in the company. I would create the games, copy them onto floppy disks, place them in zip-lock bags, and Bill would load them into his car and drive up and down the East Coast, selling them to retailers. He'd stop at a pay phone every so often to give me an update on how sales were going, and after a particularly successful day of sales I remember Bill saying to me: 'I think we might be on to something here!'

RG: There are always struggles in starting any new business, so are there any stories you'd like to share about the early days of MicroProse?

SM: It was pretty exciting. We were at the very beginning of the games industry, so we had to figure most things out as we worked. Bill and I grew the company once we confirmed that there really was an audience for computer games, but back then it only took a programmer and a couple of artists to make a game, so we still kept the company small in the early years. It really was thrilling to be a part of the birth of an industry.

RG: What are some of your favourite games to have come



SELECTED TIMELINE

Hellcat Ace 1982
Spitfire Ace 1982
NATO Commander 1983
Solo Flight 1983
F-15 Strike Eagle 1984
Silent Service 1985
Decision In The Desert 1985
Crusade In Europe 1985
Gunship 1986
Conflict In Vietnam 1986
Sid Meier's Pirates! 1987
F-19 Stealth Fighter 1988
Sword Of The Samurai 1989
Red Storm Rising 1989
M1 Tank Platoon 1989
F-15 Strike Eagle II 1989
Covert Action 1990
Sid Meier's Railroad Tycoon 1990
Sid Meier's Civilization 1991
Gunship 2000 1991
Return Of The Phantom 1993
Pirates! Gold 1993
F-15 Strike Eagle III 1993
CPU Bach 1993
Sid Meier's Colonization 1994
Sid Meier's CivNet 1995
Sid Meier's Civilization II 1996
Sid Meier's Gettysburg! 1997
Sid Meier's Antietam! 1998
Sid Meier's Alpha Centauri 1999
Sid Meier's Alien Crossfire 1999
Sid Meier's Civilization III 2001
Sid Meier's SimGolf 2002
Sid Meier's Civilization III: Conquests 2003
Sid Meier's Pirates! 2004
Sid Meier's Pirates! (Xbox) 2005
Sid Meier's Civilization IV 2005
Sid Meier's Railroads! 2006
Sid Meier's Civilization Revolution 2008
Sid Meier's Civilization IV: Colonization 2008
Sid Meier's Civilization V 2010

"It was a dream come true to start MicroProse and to make videogames for a living"

out of MicroProse prior to the Spectrum Holobyte buyout? Why are they your favourites? Do you have any stories about the making of these particular games?

SM: Choosing a favourite game that I've designed is like saying you like one of your children better than the other – I just can't choose! We made some fun games at MicroProse like the combat flight simulators, *F-15* and *F-19*; *Silent Service*; *Railroad Tycoon*; *Pirates!*; and *Civilization*.

When I told Bill I wanted to make a game about pirates, he was worried because it was such a change from the games we'd been making. He thought people wouldn't know it was one of my games, so he decided my name should go on the game box. So, *Pirates!* became the first game with 'Sid Meier' in the title.

RG: Can you tell us more about what MicroProse was like after the buyout by Spectrum Holobyte? What caused you to decide to move on and form Firaxis?

SM: MicroProse was a great company, and as it grew I knew that I wanted to continue doing two things: to work with smaller teams and to be able to code games every day. After some time had passed, I decided it was time to go off and start a smaller development studio and just focus on creating games, not the publishing end of things. So, we started Firaxis as an independent development

* FIVE TO PLAY

SID MEIER'S PIRATES!



RELEASED IN ITS first iteration in 1987, *Sid Meier's Pirates!* was free-form adventure at its finest. Although the premise is deceptively simple, the huge variety of options added nearly limitless replay value. The player could choose from not only the time period in which the game is set and national affiliation of the player character, but could also make sweeping decisions on how the game was to be played. Players could be merciless, plundering and laying waste to everything, or take a largely non-violent approach, trading in commodities to make their fortune. They could remain staunchly loyal to their character's nation of origin or play the mercenary, going whichever way the shifting winds of the region happen to blow. Of the various ports and variations, the 1993 release of *Pirates! Gold* stands out as the best balance between the core gameplay and updated presentation.

SID MEIER'S RAILROAD TYCOON



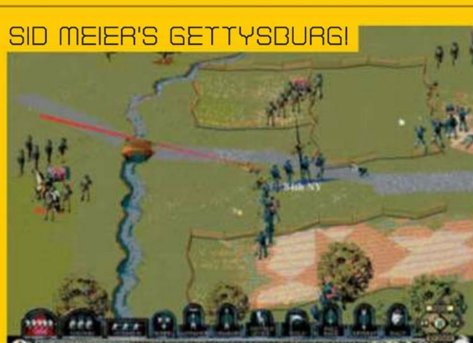
RAILROAD TYCOON IS a game of incredible complexity, a wolf in sheep's clothing waiting to compel the casual player to many a sleepless night. Looking at the game today it seems amazing that so much was crammed into the space and processing constraints of the day. On the higher difficulty modes, the player must not only struggle to ensure their fledgling company's success through careful consideration of the various cargoes, the best balance between volume and speed of deliveries, distances between cities, and other logistical concerns, but they also must do their best to ward off the competition in a cutthroat world of rate wars and hostile takeovers.

SID MEIER'S CIVILIZATION



WHO HAS NEVER dreamed of having complete control over one of the greatest civilizations known to man, of controlling its every move and every development for millennia? *Civilization* was the first game to truly offer you this opportunity, to give the player a chance to forge the greatest civilization the world has ever known. Much like *Pirates!*, it gave you a multitude of ways to achieve this goal, from outright military domination to winning the space race. Although later games were, in many ways, great improvements on the original, there is always something to be said for revisiting any game that launched such an iconic gaming dynasty.

SID MEIER'S GETTYSBURG!



BASED ON THE historic American Civil War battle of 1863, *Sid Meier's Gettysburg!* is an innovative foray into the world of real-time strategy. Although the game's controls may seem a little foreign to those more accustomed to the likes of *Command & Conquer*, their intuitive nature will quickly override any initial complaints. The core gameplay, however, may take a little getting used to. Unlike many real-time games of the era, troop positioning, terrain and overall morale have a huge impact on your troops, giving the game a more realistic feel. The AI is also superb, imbuing the enemy generals with enough intelligence to offer the player a true challenge.

SID MEIER'S ALPHA CENTAURI



AT FIRST GLANCE, *Alpha Centauri* seems to be *Civilization II* set in space, which is hardly a bad thing. It is, however, also host to a number of great improvements. The most noticeable change is the addition of customisable units, more diplomatic options, and more paths to victory. The multiplayer experience was improved as well, with the implementation of a new system to allow multiple players to play the same turn simultaneously. The game also boasted an interesting storyline to complement its sci-fi feel. If these new options aren't enough to hold your interest, *Alpha Centauri* allows for easy tweaking, which has caused a number of mods and tweaks to surface.

*NUMBER CRUNCHING

28 years in the industry

2nd person inducted into the Academy of Interactive Arts and Sciences' Hall of Fame

94% review average for *Civilization II*

Credited in **5** games with names ending in an exclamation point!

Twice credited in **3** or more games in a single year (**1985** and **1993**)

$70 million paid by Hasbro Interactive to purchase MicroProse in **1998**

$22.3 million paid by Take-Two Interactive for the rights to *Civilization* in **2004**

$26.7 million paid by Take-Two Interactive for Firaxis Games in 2005

About **788,000** Google results for 'Sid Meier'

29 entries in the *Civilization* series, including main games, compilations, spin-offs and expansions

8 million units of the *Civilization* franchise sold as of **2008**

studio, and we contracted ourselves with a few different publishers in order to take our games to market.

RG: Was there anything you specifically wanted to do differently forming Firaxis, or anything you wanted to change from how you went about creating MicroProse? Did you find it easier going through the startup phase of the business the second time around?

SM: We did have much more knowledge and experience in making games when we started Firaxis, so we were able to get the studio up and running pretty quickly. We've kept the focus on making fun games, having a company culture in which everyone is a valued contributor to our success, and living by the motto that you have to have fun to make fun.



> "I wanted to do two things: to work with smaller teams and to be able to code games every day"

From a game design perspective, we established an iterative process in which we create a basic prototype that's fun to play, even without exciting graphics and fully implemented features. We have a system, we play and then improve, then again we play and improve, but this is done throughout the development process. We keep what works and get rid of what doesn't. This approach ensures that we remain focused on the gameplay experience every step of the way and deliver a fun game.

RG: Over the years a great deal has changed in the gaming industry. Do you feel these changes have made it easier or harder for developers to be successful, and in what ways?

SM: The industry has definitely changed from a business standpoint. Most games are much more expensive to make now than when I started in the early Eighties. Back then, we could make a game in our garage with three people, and now it typically takes a big office, a team of at least 30-50 people, and lots of money to make a great game. There is also far more competition along with many more different gaming platforms and a constant influx of new games for players to choose. Creatively, we're still faced with the same fun challenges we had in the past, and that's to make a really cool and engaging game experience for the targeted platform.

I think now is one of the most exciting times to be a game designer. With the rapid growth of social networking games, there are new opportunities for smaller indie developers to make and distribute games. We're seeing a wider variety of games on more cool devices than we've ever had before, and that's great for the whole industry.



RG: Are there any, for lack of a better term, rival developers that you feel a particular affinity or respect for? If so, why, and can you give examples of games or business decisions that demonstrate those reasons and explain?

SM: Some of the game designers who have inspired me over the years are Dani Bunten, creator of *The Seven Cities Of Gold*, the first open-ended adventure game; then Will Wright for *SimCity*, which was the first 'god game' and set the stage for *Civilization*. Also, Bruce Shelley, one of my early design partners at MicroProse, who went on to found Ensemble Studios and create the *Age Of Empires* series: one of

the greatest real-time strategy games ever made.

And then there are games that I wish I had thought of first, like *Guitar Hero*. Now that's a game that hits all sorts of right notes – no pun intended – in how it opens up the creativity and joy of music to a huge number of people who might not have had access to that before. It's always inspiring to see developers take a great idea and make it into a hit game.

RG: The majority of your games have a reputation for being more intellectual, some even being referred to as 'infotainment'. Do you feel this is something important to the industry? Do you feel that this has helped contribute to your success?

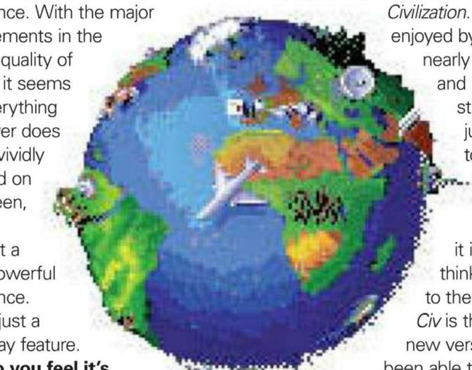
SM: Our focus is always on making entertainment and delivering a fun experience to players. I design games based on topics that interest me, like pirates, railroads, airplanes, history, and those topics also offer the opportunity for folks to learn something new as they play. We want to put people in the position of doing or becoming something great when they play our games. For instance, *Civilization* is based on a broadly appealing topic – all of human history – and offers players the chance to build an empire and become the greatest ruler in the world. *Civ* puts players in control and presents them with lots of interesting choices and decisions to make and, in turn, they feel really powerful and smart each time they win a game. They aren't experiencing history; they're making it and learning some great stuff along the way. This combination seems to be very appealing to people.

RG: In recent years gaming has seen a sudden upsurge in games with antiheroes as protagonists. Games like *Grand Theft Auto* have become hugely prevalent and successful, with *GTA* itself being perhaps one of the most recognised franchises in gaming today. How do you feel about that? Do you think it has changed the industry forever, or will it be a passing phenomenon?

SM: From a game design perspective, *Grand Theft Auto* has clearly taken the games industry to the next level. The open-ended gameplay and movie-quality graphics set a new standard for triple-A titles, and that inspires other designers, which is great for all of us who love to play games. The games industry is constantly changing and growing due to the wide variety of games being played by consumers on a huge array of devices

RG: Do you feel that the violence in these types of games is an extension or mirror of earlier violent games such as first-person shooters or military simulations, or do you feel that the freedom of unprovoked violence makes them something completely different?

SM: Violence in any game is just one of the many elements presented to players in the gameplay experience. With the major improvements in the graphic quality of games, it seems that everything the player does now is vividly depicted on the screen, which makes it a more powerful experience. It's still just a gameplay feature.



RG: Do you feel it's a reflection of a changing industry or a changing society? Do you feel that these types of games do have social repercussions?

> "I make games based on topics that interest me, and fortunately I haven't run out of interesting topics yet"

SM: The industry is driving changes across all elements of game design and technology in order to meet the ever-increasing demands of customer expectations. So, both parties are driving change. There are a lot of commentaries taking place about the social repercussions of games; we'll have to keep an eye on that research to understand what the impact may be.

RG: Do you feel that the gaming industry should bear a level of social responsibility? Do you feel that videogames should be treated as an art form and be free of censorship?

SM: We feel that games should be appropriate for their intended audience and that developers and publishers bear the responsibility of making sure that happens. Here in the US the ESRB has established a clear rating system to help ensure that game makers and consumers are aware of the type of content they can expect in each game.

RG: Moving on, are there any particular games or franchises that you are particularly proud to have begun or been a part of? If so, what makes these specific titles important to you? Do you feel they have had any far-reaching effects on the industry in general?

SM: I'm particularly proud of *Civilization*. It's been enjoyed by players for nearly 20 years now and is still going strong. We're just about to release *Civilization V* and the buzz around it is amazing. I think the secret to the success of *Civ* is that with each new version we've been able to stay true to the core gameplay and wrap it in whatever audio/visual presentation makes sense for the intended platform. History is a topic that appeals to all kinds of people, all over the world. It's pretty compelling to be given the chance to become a major player in the making of history and create your own story. That, along with the 'just one more turn' factor, seems to be what people like best about the game. We've created *Civ* games for the PC, consoles, handhelds, iPhone, iPad, and now we're bringing *Civ* to social network gaming.

I'm currently designing a *Civ* experience for Facebook called *Civilization Network*. Anyone interested can join our Facebook fan page at **www.facebook.com/civnetwork** – sorry for the shameless plug! 20 years ago I wouldn't have predicted that our little turn-based strategy game would take over the world!

RG: Similarly, are there any games, your own or anyone else's, that you feel didn't get the attention they deserved? If so, what do you feel made them so special?

SM: Well, years ago I made a game called *CPU Bach* that was a music-generating program for the 3DO platform. Players could create Baroque music in the style of Bach for various instruments and in a variety of forms – concerti, fugues, minuets, chorales. The compositions were then performed by the software with graphics on screen showing the virtual instruments being played. It didn't get a lot of love back then, but with the popularity of music-based games now, it might just be a hit!

RG: Is there anything that you hope either the industry or gamers have taken from your career thus far? Any lessons learned or impressions given?

SM: The key to any great game is making sure it's fun. My approach has always been to find the fun first, then surround it with lots of interesting choices and decisions for the player to make, and make sure the player is the central figure in the game experience.

RG: Finally, where would you like to go from here? What games are itching to be created? Where would you like to see yourself in another five or ten years?

SM: Right now I'm enjoying the process of making a social networking game. It's a new frontier in gaming and we're excited to be in and on the ground floor. I make games based on topics that interest me, and fortunately I haven't run out of interesting topics yet. I'm hoping to make games forever because there are so many great devices on which to play them and still so many great topics left to cover.

YOU ASK THE QUESTIONS

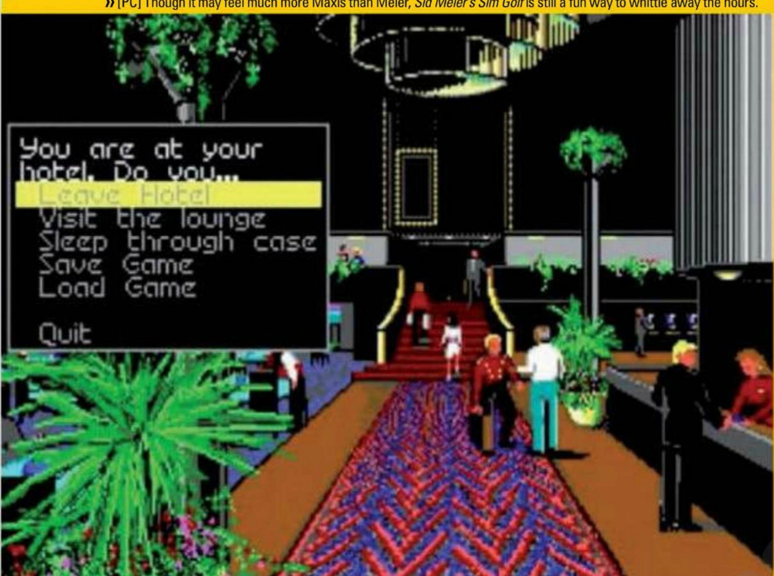
Despite the rush surrounding Civilization V, Sid Meier took a few moments to answer your questions



» [PC] *Magic: The Gathering* formed a great mix of exploring a dungeon-crawling world and collectable card gaming.



» [PC] Though it may feel much more Maxis than Meier, *Sid Meier's Sim Golf* is still a fun way to whittle away the hours.



» [PC] What's that third option? Sleep through case? The realism in *Covert Action* is above reproach.

I'm a huge fan. I really liked *Civilization*, but *Colonization* is where it was at. Why did it take so long to make a follow-up, or remake, to *Colonization*?
We had received a lot of requests from fans over the past few years to bring back *Colonization*. It wasn't until after the completion of *Civilization IV* that it seemed like the perfect opportunity to build a new *Colonization* using that engine, so that's when we decided to make the game.

Would you like to do another Civil War game, maybe in the style of the *Total War* series?
The Civil War is a great topic for a game. I really enjoyed making *Gettysburg!*, so you never know. Maybe there's another one in my future.

Sim Golf was ace, but the sport itself is a tad dull. How about using a similar formula to make _Sim Soccer_?
I make games based on topics that interest me like history, pirates, railroads, golf, etc. Soccer just doesn't fall into that category for me, but I agree it's a cool idea for a game.

I always liked playing the Dutch in *Colonization*. Did you have a preferred colonial power when playing the game? If so, which?
I like playing all of them. The game experience is different every time I play, but if I had to choose a favourite it would probably be the Dutch as well.

Do you like being one of the few game designers to get their name above the title?
That was a marketing strategy that the team came up with in the early days of MicroProse and it has stayed in place over all of these years. It's certainly nice – and humbling – to see my name on the box of so many games that people enjoy playing.

Are there any projects you cancelled or stopped working on that never saw the light of day?
Sure, that's a regular part of being a game designer. There was a game about dinosaurs that I worked on over ten years ago that never made the cut. We just couldn't find the fun in the game, so after trying lots of different approaches we decided to put a stop to development. I still think the topic is a great idea for a game, so maybe someday we'll revisit it.



You've created classics in a range of genres. Are there any other genres you'd like to take a stab at?
Well, I'm developing *Civilization Network* right now, which is a social networking game based on the *Civilization* experience, and it's a new genre for me, too!

How do you see the 'big studio' model changing with the number of companies looking at the mobile and networking markets?
The recent popularity of iPhones and social networking games has created many opportunities for developers. There are more and more people playing games, and the idea that games can be played any time and any place means people are playing games more often and always looking for new experiences. That creates a perfect world for game makers, whether you're a big publisher/developer or a small indie company, so I think we'll see all kinds of developers making games.



» YOUR ESSENTIAL GUIDE TO FORGOTTEN GAME SYSTEMS

OBSCURA MACHINA

#3 Tatung Einstein



» The Einstein could support either a monitor or a portable television as its display.

For a computer that was financed by a Taiwanese company, named after a German-born intellectual, and allied to the Japanese MSX hardware standard, you may be surprised to learn that the Tatung Einstein was actually developed and manufactured in good old Blighty. The machine was designed at Tatung's Bradford-based research lab and assembled at the company's UK factories in Bridgnorth and Telford, while the system software was provided by Crystal Computers of Torquay.

Leading the development team was Bristol-born Roy Clarke. Speaking shortly after the machine's launch in 1984, he revealed the thinking behind the design: "The Einstein was conceived and developed for a specific sector of the market, embracing the enlightened home computer user, the educationalist, and the small business user. Every parameter was carefully considered in relation to the key objective of providing a complete package at minimum cost."

JUST THE FACTS

More than 50,000 Einsteins were manufactured in its first six months of release, with 5,000 of these exported to Taiwan.

The Einstein was physically large, measuring 43x51x11cm. It would hurt if it fell on your foot.

The operating system was named Xtal DOS and was CP/M compatible. It was provided on disk and had to be booted up.

A version of the well-regarded BBC BASIC was available for the Einstein.

The system ROM was 8KB in size, expandable to 32KB.

Spectrum games could be played on the Einstein using the 'Speculator' hardware add-on from Syntaxsoft.

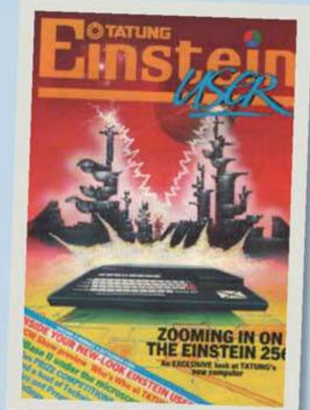
The original Einstein was succeeded by the Einstein 256, a more powerful computer that was similar to the MSX2 machines.

Ultimate's *Knight Lore* was due for release on the Einstein in November 1986. It never materialised.

To keep costs down, the Einstein was built using tried-and-trusted, off-the-shelf components. At its heart was the popular Zilog Z80A processor, the mainstay of many an 8-bit micro. Video was provided by the Texas Instruments TMS9129 display controller, which offered four different screen modes with a maximum resolution of 256×192, a 16-colour palette, and sprite-rendering capabilities, while audio was produced by the three-channel General Instrument AY-3-8910 sound generator. 64KB of RAM was included as standard.

The spec closely matched the MSX hardware, but there were several differences that prevented it from conforming to the newly established standard. Microsoft BASIC was overlooked in favour of Xtal BASIC, a respected dialect that was previously available for Nascom computer kits. Roy said of Xtal BASIC: "It's got most of the common core of Microsoft BASIC and a lot of extra features, which are good for hackers and enthusiasts. We've got a language that I believe is probably the most powerful BASIC around. It's certainly easier to drive than BBC BASIC."

The key difference, however, was the absence of a tape interface. In an ambitious and unusual move, the Einstein came with a built-in 3-inch disk drive. "Tape is a pain," said Roy at the time. "One of our team had a BBC, another had a



» Tatung issued the quarterly *Einstein User* magazine. It was sent out to members of the Einstein Users' Club.

The Tatung Einstein was one of the many 8-bit also-rans that never quite made it against the big boys. Martyn Carroll finds out if it deserved to do better



» Using the £50 'Speculator' add-on, you could coax the Einstein into playing Spectrum games.



» Space sim *Elite* received an official Einstein release, produced under licence by Merlin Software.



NewBrain, and I had an Apple and a Sharp, so we've all suffered under tape-based systems and we all hate them. We built in a 3-inch drive and that obviated the need for tape." There was also an empty bay to install a second drive, and a further two external drives could be added, so the question with the Einstein wasn't, 'Would Sir like a disk drive with that?' but rather, 'How many drives does Sir require?' According to Roy, 3-inch drives were chosen over the 3.5-inch format because it was cheaper and easier to source the volumes required from the hardware manufacturers.

There may have been no tape interface or cartridge slot, but the machine featured an impressive range of external connectors, including twin joystick ports, an RS-232 serial port, a parallel printer port, a user-programmable port, and a system bus known as the 'Pipe' – a nod to the BBC Micro's 'Tube'. It also looked the part, with a lovely full travel keyboard and a large, beige case on which you could place a monitor or portable TV, as both were supported.

The Einstein went on sale in June 1984 with a retail price of £499, which was considerably more expensive than your average 8-bit. If you had particularly deep pockets, you could add the second internal drive for £149, while an external drive would set you back a further £189. An 80-column display card could also be added for £49, and a dot-matrix printer was yours for £229. Actual sales figures are unknown, but it's safe to say that the Einstein didn't sell in great numbers. Indeed, it was heavily discounted and, by 1986, you could pick up the core computer for less than £100.

Einstein owners did at least have access to a reasonably large software library. Besides the expected utilities and business programs, there was a surprising number of well-known games ported from the MSX and Spectrum. They included Jon Ritman's *Batman* (Ocean), *Chuckie Egg* (A'n'F), *Starquake* (Bubble Bus), *Highway Encounter* (Vortex), *Druid* and *Elite* (Firebird), and *Manic Miner* and *Dragon's Lair* (Software Projects). Infocom also released many of its interactive fiction titles for the machine, including *The Hitchhiker's Guide To The Galaxy* and the original *Zork* trilogy. Best of the lot, though, was Konami's excellent value compilation disk, which included *Yie Ar Kung-Fu*, *King's Valley*, *Time Pilot* and *Comic Bakery*, all of which were ports of the MSX cartridge versions.

In retrospect, however, the Einstein is perhaps more famous for the games developed on it rather than for it. Thanks to its decent keyboard, ample memory, built-in disk drive and overall reliability, it proved to be the perfect programming system. A number of the UK's biggest software houses – notably Imagine, Ocean and Elite – used Einsteins to develop games for the Spectrum, CPC, C64 and other platforms. Code would be created and assembled on the Einstein, then transferred directly to the target machine, where it could be tested and debugged if necessary. In later years, Atari STs and subsequently PCs would emerge as the development systems of choice, leaving the Tatung Einstein to claim its place as a fascinating footnote in the history of computing.

PERFECT THREE



KING'S VALLEY

The pick of Konami's four-game disk compilation, and probably the best game available for the Einstein. This classy platformer sees you raiding pyramids while avoiding various nasties. Brilliant fun.



CHUCKIE EGG

Hen House Harry's first adventure was available for loads of rival machines, but this version easily holds its own. Nice and colourful, and with the fast and fluid gameplay intact, it's an essential game.



LAZY JONES

David Whittaker's multi-game mash-up represents real value for money, as a few of the arcade-inspired segments are actually better than some standalone Einstein releases. A quirky classic.

Thanks to Mario Castro for providing information and images. Visit his Tatung Einstein Reborn website at **www.tatungeinstein.co.uk**.

Jet Set Willy II

Given the huge success of Manic Miner and Jet Set Willy, a third Miner Willy game was not just inevitable but compulsory, yet Software Projects appeared incapable of delivering. Martyn Carroll talks to Derrick P Rowson, the programmer who came in and picked up the pieces



IN THE KNOW

- » **PUBLISHER:** SOFTWARE PROJECTS
- » **DEVELOPER:** SOFTWARE PROJECTS
- » **RELEASED:** 1985
- » **PLATFORMS:** CPC, SPECTRUM, C64, C16, BBC MICRO, ELECTRON, MSX, EINSTEIN, AMIGA
- » **GENRE:** PLATFORM

"The mythical *MegaTree*?" exclaims Derrick Rowson when asked about the infamous, unreleased game that was supposed to be the true sequel to *Jet Set Willy*. "It was drawn on a fag packet and discussed over a pint. I heard about it and knew all of those involved but I had nothing to do with it."

Derrick is probably wise to distance himself from that particular debacle. The story goes that Matthew Smith, livewire author of the Miner Willy games, was deemed to be a disruptive influence at Software Projects HQ in Liverpool. As a result, company directors Alan Maton and Tommy Barton relocated him to a house on Holt Road in Birkenhead and tasked him with knuckling down and knocking out *The MegaTree*.

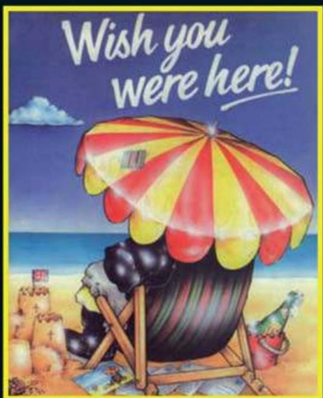
Matthew, who was aged 18 at the time, was appointed two similarly-aged colleagues in the shape of Stuart Fotheringham and Marc Dawson. Left to their own devices, the three teenagers failed to come up with anything close to a finished game and the project was scrapped three months later. This left Software Projects with a gaping pit in its

"We decided to jump in feet-first. We would add a rocket and blast the player into space"

DERRICK ON UPGRADING MINER WILLY'S MANSION



» [Amstrad] The house on Holt Road, where some Software Projects staff lived and worked, makes an appearance.



» Promotional adverts for *Jet Set Willy II* played on the well-known desert island rumour.



release schedule. There would be no new Miner Willy game in stores for Christmas 1984, and unless Matthew could rediscover his former work ethic – which saw him write *Manic Miner* in just eight weeks – there might be no new Miner Willy game, period. The situation was looking forlorn when a surprise solution presented itself to the bosses.

Derrick Rowson and Steve Wetherill were two Software Projects programmers whose first job at the company was to convert *Manic Miner* and *Jet Set Willy* to the newly-released Amstrad CPC computer. Their version of *Manic Miner* was almost identical to the Spectrum original, but with *Jet Set Willy* they went a little crazy, expanding Willy's already substantial mansion by adding 74 new rooms to the original's 60. This new, super-sized version was subtitled *The Final Frontier*, as they'd placed a rocket on the roof which blasts Willy into outer space and beyond. There was so much extra content that Software Projects hatched a rather brazen plan to take the enhanced CPC version and release it for the Spectrum as *Jet Set Willy II*. "It was only meant to be a modification," says Derrick about the CPC conversion. "Alan Maton came to my office and asked me if I could rewrite it back onto the Spectrum. I said 'maybe', and that was enough for him to ask me to do it."

Although unplanned, it was fitting that Derrick should be involved in the further adventures of Miner Willy, as he was one of Matthew's closest friends at Software Projects. In fact, it was Matthew who added Derrick to the payroll. "I had known Matthew since before he wrote *Manic Miner*," he says. "A group of us used to hang about at our local Tandy store and Matthew would pop in on his way home from school with his large brown briefcase tucked under his arm, and inquire what we were doing. We later heard about his ongoing escapades with *Manic Miner*, and he kept on saying that he was waiting for his 18th birthday so he could start his own business. He lived quite close to the shop and, as it was on my way home, I would walk with him.

"At the time I was unemployed, but computers seemed to be a logical expansion of my main interest, which was mathematics. I found that being profoundly deaf made most careers unsuitable, and yet on a computer you only needed logic and no-one to talk to. I taught myself Z80 coding, which seemed to be pretty easy, and over the months I showed some of my code to Matthew. You can imagine my surprise when he said, 'Come and work for me'."

Software Projects occupied part of the sprawling Bear Brand Complex, a former wartime munitions factory in Allerton Park, Liverpool. Derrick remembers that when he joined the firm it was very much in its infancy. "For the first couple of months we more or less just hung around this empty factory block. There were no desks, chairs or even computers in the place and over the months we watched it being built. On one of our shopping trips with Matthew we bought some Tandy TRS-80 Model 4 computers and a huge 24-pin line printer."

With the new kit, Derrick and Steve began to work on the CPC conversion of *Manic Miner*. The bosses wanted the game finished as quickly as possible, hence assigning two men to the job, but there were a couple of major hurdles to overcome. The first was that the Amstrad computer was a brand new box of tricks. "We knew absolutely nothing about the machine and we spent weeks writing test routines to try and understand its limits. We were given some pre-release Amstrad software that I considered to be ghastly, which is why we spent so long studying the hardware." Having worked out how to get the best from the CPC, they



» [BBC Micro] With all these new rooms being built, Miner Willy could really do with a quantity surveyor.



» [MSX] Venture past The MegaTree on the MSX and Einstein, and you'll discover this extra screen.

MINER VERSIONS

JET SET WILLY II APPEARED ON almost as many systems as the original game, and each version is unique or interesting in some way. On the Commodore 64 you can jump into the toilet at the beginning of the game and discover two extra screens – Now Your In It (sic) and To Thy Grave. The MSX and Tatung Einstein versions also feature a couple of addition screens – The Maze and Transmat Testing Bay – and both are harder to find and more rewarding than those on the C64. The Commodore 16 version, converted by Tynesoft, is a curious one, as due to lack of memory it's missing around 50 screens, and those that remain are split across four separate loads.

The most intriguing version, however, can be found on the BBC Micro, where Tynesoft issued separate disk and tape releases. The disk version is more or less the full game, yet on tape nearly all of the original *JSW* screens have been removed, leaving just the new ones (plus two BBC-specific screens – Fallout Shelter and Ethel the Aardvark). The map has been cleverly altered so that you can begin exploring the new screens almost straight away. As such, this version better suits the sequel tag as nearly all of the content is fresh. The Electron version is the same as the BBC Micro tape release, only with fewer on-screen colours.

The Amiga version, released belatedly in 1992, introduces updated graphics and screens that scroll rather than flip. The map is faithful to the original, although it looks and feels like a very different game.



» [Amstrad] There's only one way off the Deserted Isle – an invisible teleport that beams you up into space.

then discovered that no *Manic Miner* source code would be provided. Luckily, Derrick had previously developed his own disassembler which proved invaluable. "Steve hacked into the game using my disassembler and delivered me the room, sprite and block data which I then slotted into our code. At no time was any help offered by way of source code."

Having overcome these initial problems with *Manic Miner*, the pair were able to hit the ground running when it came to converting *Jet Set Willy*. There was even time to address some of the faults in the original. "I decided we needed to fix the bugs in the room layout. The jumps that allowed the player to access screens that didn't exist and jump instead to other screens seemed to be an easy fix, so I planned on changing the layout." Derrick is referring to those leaps of faith in the original Spectrum version that would warp Willy to unexpected places, such as when you jumped off the top of rooms like Rescue Esmeralda and Watch Tower. "Rescue Esmeralda just needed a new room bolting on top [The Belfry]. We then discussed how we could get around the Watch Tower problem, and we knew of the stories and rumours that circulated about the original game, so we decided to jump in feet-first. We would add a rocket and blast the player into space! Steve produced the Miner Willy space suite sprite while I coded in the rocket and the special effects that went with it. It seemed only natural to end up on a starship."

This sojourn into space allowed them to conjure up lots of wacky new screens. "I was aware that memory was going to be an issue somewhere along the line and decided to write an editor to allow the new rooms to be added, and then I implemented a simple compression method for the data. Once we could add new rooms anywhere, we really got stuck in. Steve wrote the routines for moving floors [seen in The Trouble With Tribbles screen] and was very busy adding new sprites. Steve would suggest a scenario and then we would design the rooms to suit. Each of the rooms in space was basically a skit at someone or something, or was us trying to see what could be forced from the game engine. Eggoids was to see how far we could push our sprite routines. The Incredible Big Hole In The Ground screens were Steve implementing sprites that only appear in one direction."

While most of the new screens were created outside of Willy's mansion, they weren't yet finished with his not-so-humble abode. Matthew had left several gaps in the game map and they began to fill them in. "As the game development continued, we added the rooms in the middle of the house purely as padding. We were aware that they needed to be easy to play, as we already knew how difficult it was to wander around this house that Matthew had built. Rooms such as Dumb Waiter poked fun at Imagine's *Wacky Waiters* and made me add the lifts." The biggest empty space was located between The Forgotten Abbey and The Security Guard, which allowed for a vast new basement section to be built. "For the lower rooms, Steve came up with relevant names based on his experience as a pit trainee doing underground experience in Yorkshire."





DEVELOPER HIGHLIGHTS

THRUSTA (PICTURED)
SYSTEMS: SPECTRUM, C64
YEAR: 1983

MANIC MINER
SYSTEM: SPECTRUM, C64, CPC, ORIC, DRAGON PLUS OTHERS
YEAR: 1983

JET SET WILLY
SYSTEM: SPECTRUM, MSX, BBC MICRO, C16 PLUS OTHERS
YEAR: 1984





» Derrick, in a picture taken in the Seventies, before he was bitten by the programming bug.



> **"It never occurred to us to ask permission to make these changes and no one seemed to mind"**
> DERRICK ON BEING LEFT TO HIS OWN DEVICES



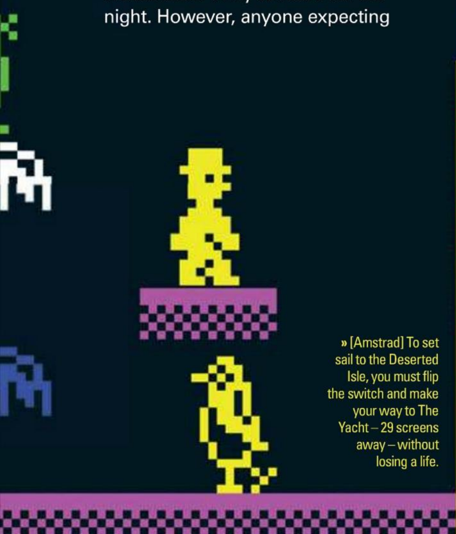
Two of the most memorable new screens would probably never be seen by many players, simply because they were so damned tricky to reach. The first was the Deserted Isle, which was included in response to a letter printed in *Your Spectrum* issue 7. A certain Robin Daines of Chester claimed that, in the original Spectrum game, if you visited Willy's yacht at a certain time you'd be whisked off to a desert island. The letter was of course a wind-up, but it clearly fooled a lot people and convinced Derrick and Steve to make the rumour a reality. "On one of our brainstorming sessions we decided to add the yacht sailing out to a desert isle, which was another rumour at the time. In the lower rooms we had already added a trip-switch, which was originally going to turn the lights out for a few seconds. I really wanted the lights to turn out and for Willy to be illuminated with a torch, but this idea was soon ditched as I couldn't see how I could implement a circle of light that followed Willy around. The switch was used to activate the yacht instead."

The other notable screen was the final one. If you collected at least 150 of the 175 objects, Maria would allow Willy to retire for the night. However, anyone expecting the original's head-down-the-toilet ending was in for a nice surprise, as Willy is unexpectedly whisked off to The Central Cavern, the iconic first screen from *Manic Miner*. "The recurring nightmare ending was a joint idea," says Derrick. "On the internet people ask why The Central Cavern is not playable. It's simply to do with the code. Only eight cell types are permitted and crumbling floors is not one of them. We would have needed to add too much code to the basic routines just so it could be played. I would hazard a guess that if I had written the code to play it, then players would have expected it to go to the next screen. At what point would it have turned from Willy's nightmare to mine?"

The pair were largely left alone as they added new rooms and features, but the bosses were about to call time on the development. "Alan and others from management would pop into our office and see how we were progressing. It never occurred to us to ask permission to make these changes and no one seemed to mind, but 'get a move on' was the message we got. For his own reasons, Steve did not want to be in the office during normal work hours. I would spend the day in the office on my own, but come home time Steve would come into work and I would spend another five hours with him. The hours I worked got longer and longer and most nights Alan would drive me home at 10 o'clock while Steve would spend the night at work and leave as I came in. This was how most of the game was written.

"The final push to finish was a nightmare. I went to work on a Friday morning and was told that the game must be on Tommy's desk by Monday morning. I spent the day trying to finish off all of the little bits that needed doing. Steve arrived as he normally did as everyone was going home. We worked together all Friday night and right through Saturday and Sunday, only taking breaks to prepare our food, which we ate while staring at the screen, typing frantically to try and finish the code. We finally finished in the early hours of Monday morning. I was so tired I needed to sleep but could not switch off. I spent all of Monday in my office. I suppose I was expecting a fanfare or something. None came."

While the management weren't popping champagne corks for Derrick and Steve, Amstrad owners everywhere would soon be singing their praises as the CPC version was superior to the Spectrum original in almost every regard. Obviously





» [Amstrad] To set sail to the Deserted Isle, you must flip the switch and make your way to The Yacht – 29 screens away – without losing a life.



MAPPED OUT

ONE OF THE most interesting new screens is the Cartography Room which, as the name suggests, features a mini version of the game's map. It was added during development to enable Derrick and Steve to quickly access any screen, and the secret code which activated this feature was left in the Amstrad version of *JSW*. "I don't think most people know of the code even now," says Derrick. "You can access it by typing 'HIEMMRAIDNAPRRRTT' whilst playing the game and then pressing Escape. The Cartography Room will be displayed and a cross can be moved so you can pick out a start room. All of the versions of the game I have played on a PC using an emulator have managed to corrupt the Cartography Room's data with their hacks. With this facility built into the game, why hack it?"

JET SET WILLY II

there were all of the extra screens to explore, but there were also a number of little tweaks that improved the gameplay. Willy now moved quicker and he was more agile – you could hold the opposite direction during a jump and he'd leap the other way as soon as he landed, giving players a better chance of escaping sticky situations. Crippling bugs such as the infinite death loop – where a dodgy jump could deplete all of your lives in a flash – had been fixed and it was also possible to actually complete the game (unlike the Spectrum, Commodore 64, and BBC Micro versions). In fact, the bugs in the original Spectrum version were one of the reasons why *Jet Set Willy II* was given the go-ahead. "It seemed just as easy to exploit this new version as it was to fix the old," says Derrick. "It would allow for a re-release that was an update and not just a version that had no bugs."

The Amstrad conversion was released in April 1985 and Steve left Software Projects shortly after to join Odin Computer Graphics, another Liverpool-based developer. Derrick, meanwhile, got stuck straight into rewriting the expanded game back to the Spectrum as *Jet Set Willy II*. He explains: "The main core of the code could be rewritten quite easily as one of the first decisions we made with the Amstrad version was to change the screen aspect ratio to emulate the Spectrum's screen. Steve's moving floors presented problems and other bits and pieces forced me to implement a small copy screen just for the local area around Willy. Whereas Matthew copied the whole screen into a buffer and then copied the screen plus sprites onto the playing screen, the Amstrad version did all of the work on the playing screen and relied on colours to detect collisions with a routine I had worked out to stop flicker. On the Spectrum I had problems trying to detect sprite collisions and my new method was to copy the relevant screen area to a small buffer, then remove all of the playing graphics from it, and if anything was left then Willy died. When it came time to write the keyboard input routine, I suddenly found that whole blocks of code needed changing. Once I committed myself to these changes, I decided to restructure the game code."

Being mathematically minded, Derrick set about the challenge of optimising the code and making it as efficient as possible. "I was used to modifying code and making one routine do multiple tasks. It makes it very difficult to follow, but it allows the code to massively shrink. Matthew's code was normally written in one go. He had the knack of using Z80 code like prose. He would work through problems, programming as he went. The code that came out would in essence be the final code and, as simplistic as it was, it worked. He had no need to rewrite code over and over again in order to reduce its size. I was only concerned with



» [Spectrum] The sequel re-coloured lots of screens and made minor changes to the layout. Compare the Cold Store as seen in the original (left) and the sequel (right).



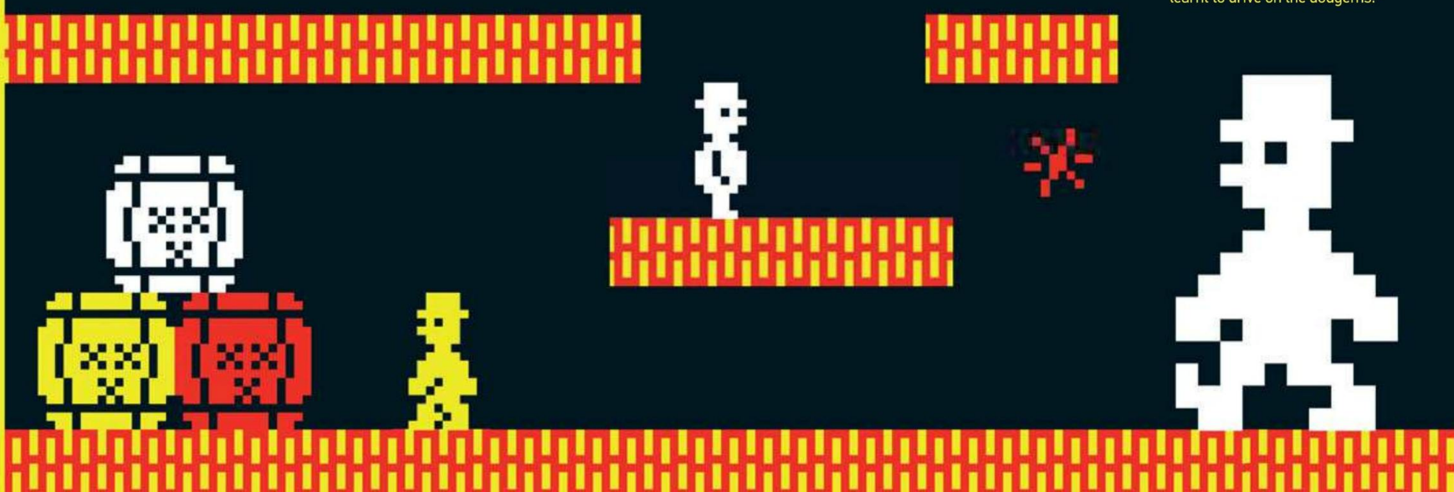
» [Spectrum] Using this teleportation device, you can beam down to an alien planet or return to the house.

MR JET SET

MINER WILLY WAS Matthew Smith's creation, so we thought it only right to have a quick chat with the man himself and find out why he wasn't more involved in the sequel, and what he thought of the end result.

"The sequel was all Derrick and Steve's work," he told us. "While they were doing that, I was supposed to be doing *The MegaTree*, so I was very hands-off. I'd just pop in and say hello and see how they were doing. I was very impressed with the compressed screens, because I was sceptical about compression at the time and it took a long while to convince me that it was worth the effort. They also addressed the major gameplay flaw in *JSW*, where you jumped from one screen to another and died straight away and then lost all of your lives. They fixed that by making you reappear in the last safe place. So the sequel was more like a second edition – double the size and with all the bugs removed."

Before we let Matthew go, we mentioned a story Derrick told us, about how he'd once given Derrick a lift home in his battered car and purposely crashed it into a skip. "That was just my normal parking technique," he answers dryly. "I learnt to drive on the dodgems."



JET SET STRIPPED

TO CONFUSE MATTERS, there are actually two versions of *Jet Set Willy* on the Amstrad CPC – one with all the new screens (subtitled *The Final Frontier*) and one that only features the screens from the Spectrum original. The bog-standard version was actually created later on, specifically for Ocean's *They Sold a Million* compilation. Software Projects wanted to continue selling the expanded version, so Derrick was asked to produce a version with all of the extra screens stripped out. This he duly did, although he couldn't resist adding a new feature in the shape of a high score table.



» [Amstrad] For the stripped-down version, Derrick even went to the trouble of reinstating the original's 'up chuck' ending.

» This memorable Software Projects advert features the key players in our story. From the far right, moving up the queue: Derrick Rowson, Alan Maton (with his arm around Willy), and Steve Wetherill.



reducing the code as far as possible in as short a time as possible. Nearly every routine was examined, and if I considered it too bloated it would be rewritten. Each little attack at the code reduced it bit further. It took me nearly as long to squash it down as it did to write the Amstrad version."

This smarter, streamlined code meant that the game was not just double the size of Matthew's version, but ran noticeably quicker. Derrick's final step was to actually let players know that all of the extra screens were included. The game was, after all, marketed as a sequel. "I decided that the rewrite needed to show that it was not the same as the original *Jet Set Willy*, which is why I added the demo flicking through all of the rooms at the start. I knew for a lot of people that the demo would be the only time they ever saw some of them. For most players the game was too difficult to reach the outer extremes of the map, and that's without the task of collecting the objects. I wish I had allowed the player to have started in either the Cartography Room or the Bathroom, and perhaps granted extra lives for the number of items collected so far."

Keen to capitalise on the 'new' Miner Willy game, Software Projects had people working on ports to

"At Software Projects, Matthew stood out for being an honest, likeable person"

DERRICK ON HIS FRIEND, MINER WILLY CREATOR MATTHEW SMITH

other machines. The Commodore 64 conversion was handled by John Darnell and Steve Birtles, two other inhabitants of the company's coding block known as the 'Zoo'. "John and Steve worked in an office at the extreme end of a long corridor – I was at one end and they were at the other. They were writing *Jet Set Willy II* for the C64 at the same time as I was doing the Spectrum version. No cross platform talk took place. The zoo analogy comes from the fact that we all worked in isolation from each other, and were very territorial. Split into camps of Z80 and 6502, split into separate rooms. There was 'us', the programmers, and 'them', the bosses up at the main offices, our keepers."

Of those keepers, Derrick remained on good terms with the man who brought him in. "Of all the bunch at Software Projects, Matthew stood out not for being a boss, not for being in a world of his own, but for being an honest, likeable person. When the coding was taking place, he would pop in and out of the building and most conversations resulted in diversions down other paths. He'd show me madcap books about how to grow grass on walls and other weird things. His mind was ticking over at a furious rate. Other times he seemed confused. The saddest bit is that he could have designed all of the new rooms if he had wanted. In fact, just before it was finished, he asked Steve and I if we wanted help in designing rooms, but by then it was too late so we declined.

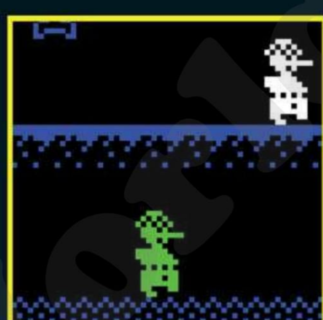
"It's 25 years since I wrote the game and I was not aware of the stories and cult that had surrounded Matthew. It came as a shock to actually go on the internet and search out my name. What started out as curiosity turned to amazement at all the stuff that was written – some of which just builds on stories that others have written, but which have no basis in fact. I was instructed to leave Steve's name out of the credits for *Jet Set Willy II* as he had no part in coding it back to the Spectrum, yet he was as much a part of it as I am. Okay, I'm the guy who shoehorned it into the Spectrum, but Steve is just as much the author as Matthew and I. I am proud of what I wrote and I am glad to have had the opportunity to have written it, but I wouldn't jump at the chance of repeating the hours needed to do the code."

Jet Set Willy II may not have been the follow-up that many fans expected or indeed wanted it to be, but then the authors never expected it to be released as a sequel either. It was just a faithful update that squashed the bugs and beefed up the room count, and at least it actually escaped from the 'Zoo' which is more than can be said for *The MegaTree*, or the even more mysterious and unreleased game *Miner Willy Meets The Taxman*.

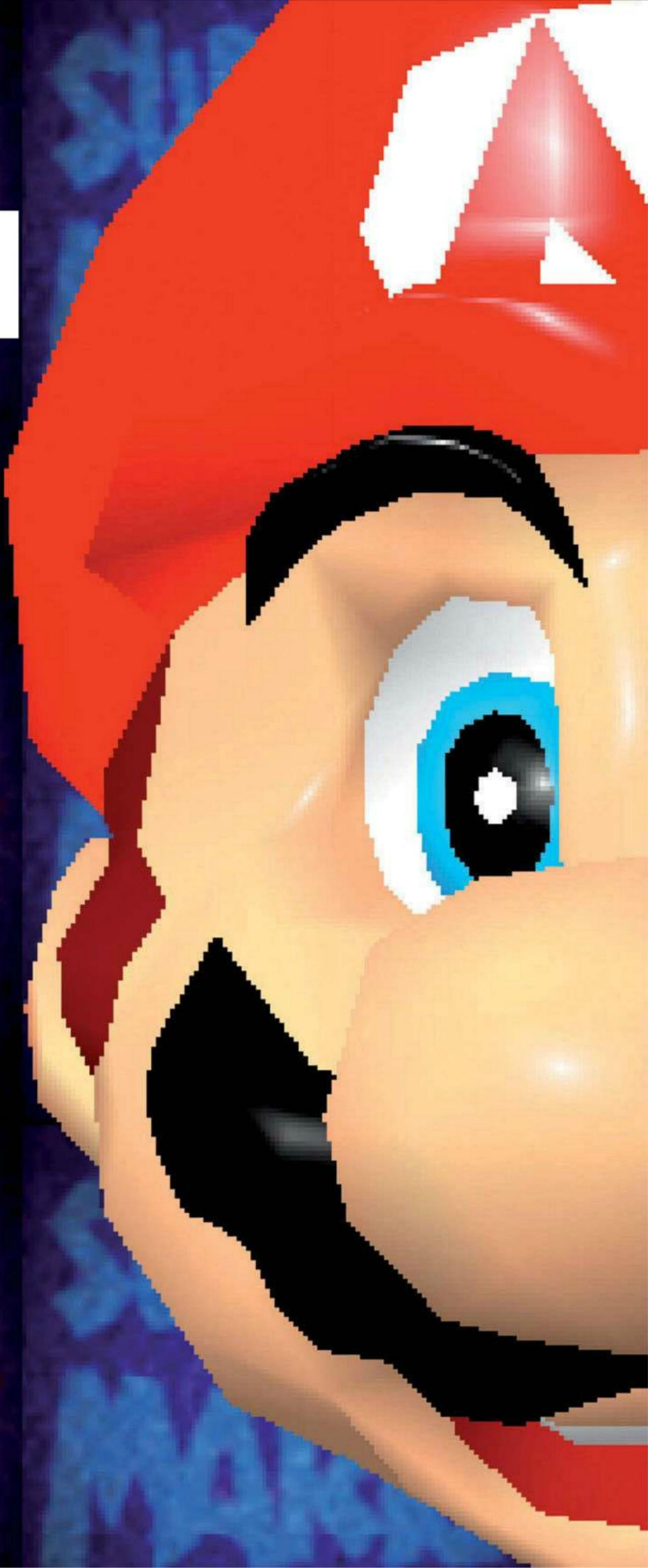
"Did I mention that I started work on the *Taxman* game?" asks Derrick, just as we're about to close the book on Miner Willy once and for all. "But that's another story…"











Super Mario 64

OUR PRINCESS IS IN A SUPERIOR CASTLE

» RETROREVIVAL



» NINTENDO 64
» NINTENDO EAD
» 1996

Unlike most 3D games released in the mid-to-late Nineties, *Super Mario 64*, like its entire 2D sprite-pushing forerunners, hasn't aged a day. The *Mario* games have always had this timeless quality, a layer of gaming moisturiser that protects them from the harsh elements of technological advances, and no game showcases this better than Mario's first 'true' 3D debut.

Released in 1996 as a launch title for the N64 in Japan, *Super Mario 64* dazzled the entire games industry on its release, and made most other 3D polygonal offerings on the Saturn and PlayStation look practically outmoded by comparison.

Upon seeing the game's memorable title screen, which displayed a fully 3D Mario face that players could pinch and pull around like a restless baby, you were instantly confident that Nintendo had captured the fun and magic of previous *Mario* games, but then you actually played the thing and couldn't quite believe what you were experiencing. How could a single game cram in so much enjoyable gameplay?

In previous 2D *Mario* games players could explore levels (in the first *Super Mario* game you even break out of a level), but owing to the technical limits of Nintendo's previous two machines, exploration meant bashing every floating block and scouring every area or stage to see whether Nintendo had sneakily hidden a piece of green pipe that would transport you to a new bit of level. While this theme was expanded in *Super Mario World*, in *Super Mario 64* Miyamoto and his design team gave players a huge living animated *Mario* world to explore. With completion of a stage resting on the retrieval of stars instead of the jumping on flagpoles, it was a perfect way to take in all of the sights the game had to offer.

Furthermore, the levels in the game opened up to the player more organically, and this freedom to explore, discover and revisit was enhanced further through Mario's expanded move repertoire, which now included a double jump, forward and backwards somersault and a handy wall-kick to effortless get him from A to B.

Perfect design and attuned controls, along with strong emphasis on play and exploration, is what make *Super Mario 64* one of the most playable videogames of all time. Return to it again and remind yourself why nobody does it better than Nintendo. *


SUPER MARIO 64
SUPER MARIO 64
SUPER MARIO 64


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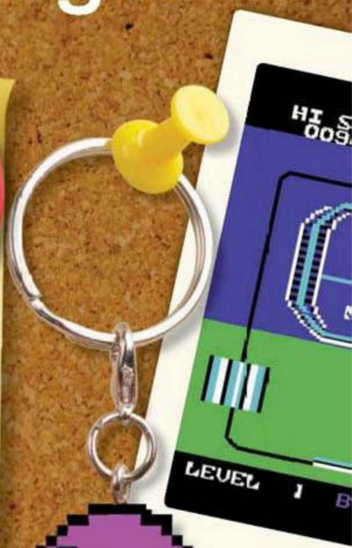
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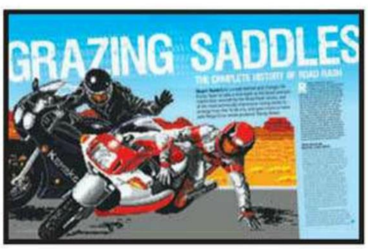
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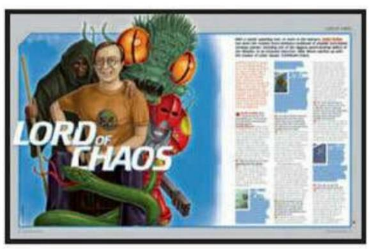
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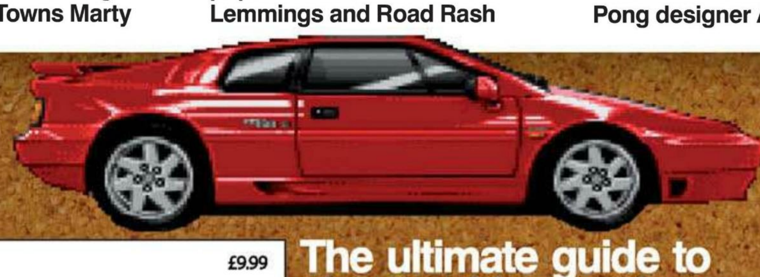
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